

THE Country GUIDE

Incorporating The Nor'West Farmer and Farm and Home

CANADA'S NATIONAL RURAL MONTHLY

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In This Issue

PIGS WITHOUT PAS — Artificial insemination for swine has started in Canada. Don Baron reports this major development on page 11.

RAILWAY BRANCH LINES. How, why, when and where should they be abandoned? Editor Lorne Hurd has summarized the MacPherson Commission's findings and their proposals on page 16.

CHILDREN AND PARENTS in B.C.'s orchard community of Naramata are learning that it's fun to paint. Read their story on page 69.



This is the dwarf mountain pine, one of the ornamentals suggested for your farmstead landscaping — see page 19.

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COVER: Rod Richmond saddles horses on his Criss Creek Ranch in the Deadman Valley, B.C. — Donovan Clemson photo.

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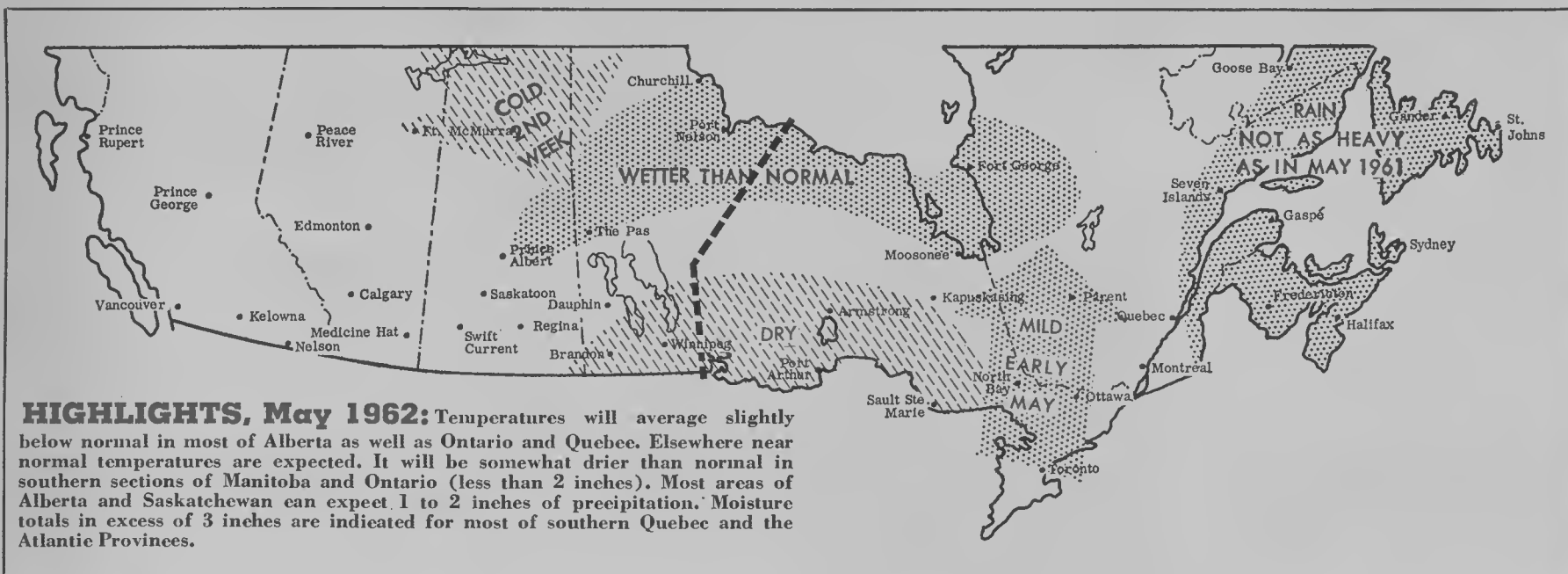
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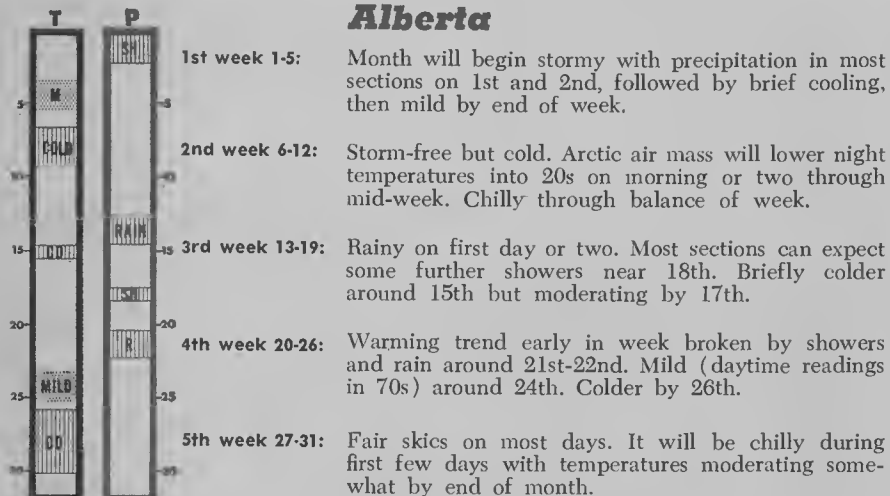
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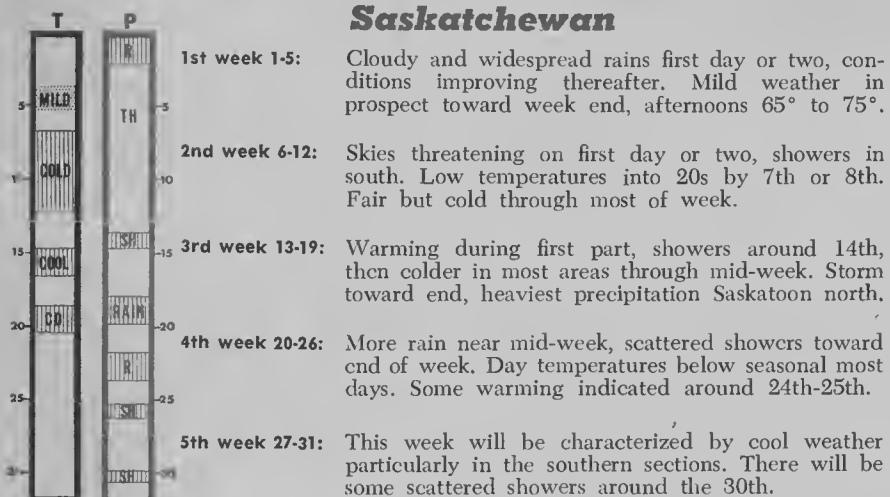


(Allow a day or two either way in using this forecast. It should be 75 per cent right for your area, but not necessarily for your farm.—ed.)

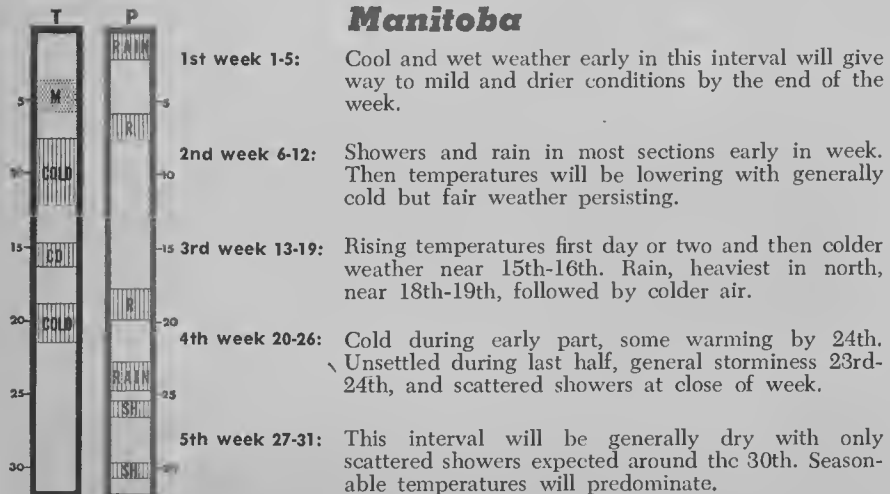
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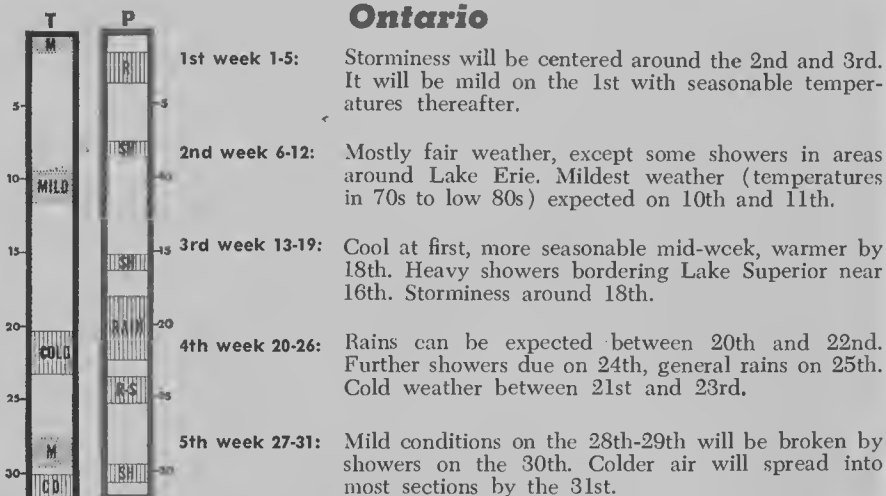
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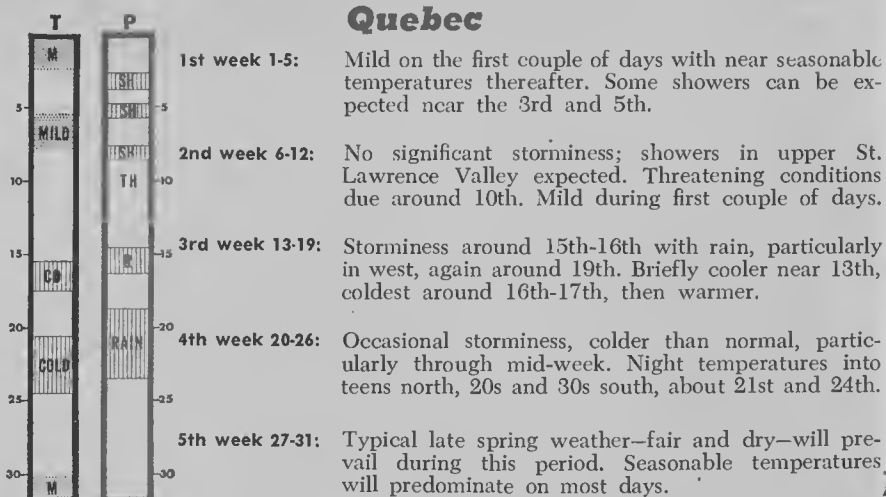
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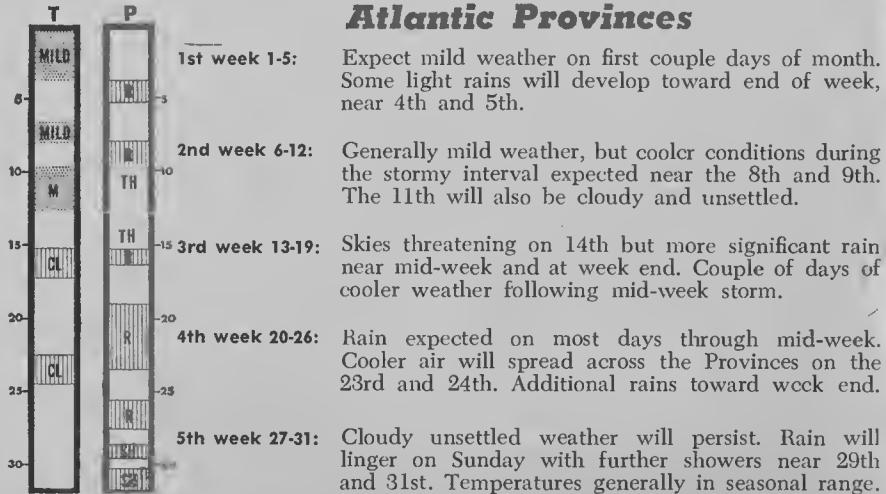
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Atlantic Provinces



(A general Prairie weather forecast for the 1962 season appears on page 15)

GUIDE POSTS

UP-TO-DATE
FARM MARKET
FORECASTS

WORLD WHEAT EXPORTS are exceptionally high and should easily topple last year's records. Supplies are being reduced rapidly with only the U.S. holding burdensome stocks.

PRICES FOR ALL CEREAL CROPS should remain strong this fall. Technical aids to increase production such as fertilizer and chemical weed control and careful seed treatment should pay good dividends.

HOG FEEDING PROFITS in Western Canada are down to very low levels, reflecting high feed costs and also pork prices weakened by heavy marketings. Returns are holding up better in the East where feed costs have not risen sharply.

CATTLE PRICES should remain strong with less cattle going into feedlots. Marketings are now running a little better than last year's, and this, along with cheaper pork, has temporarily taken the keen edge off prices.

TURKEY PRODUCERS should have an easier time this year with some production cut-backs in prospect for both Canada and the United States. Heavy stocks will dampen price increases for a while at least.

BARLEY ACREAGE planned for 1962, given average yields, should meet domestic needs, but will provide only very limited quantities for export or for building up depleted stocks.

POTATO PLANTINGS may decline this year, especially in the Maritimes. U.S. growers are planning for slightly reduced acreages. It is doubtful, however, if the cut will be sharp enough to make this a good year for prices.

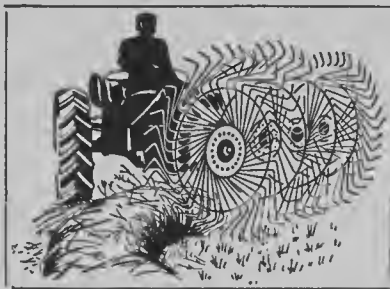
INCREASED OATS ACREAGE in prospect this spring should provide sufficient output for Canadian needs, barring another drought. However, production will not likely be large enough to replenish reserve supplies.

DURUM WHEAT PLANTINGS will likely reach record levels this year. With average weather, output will be large enough to blunt present record price levels. U.S. farmers also plan a large acreage increase.

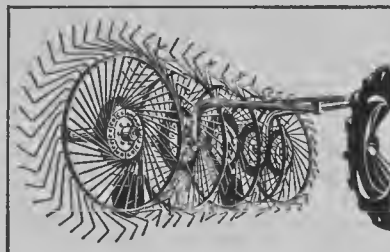
FLAXSEED GROWERS will likely cut back acreage sharply unless soil moisture reserves show a marked improvement this spring. Since there is no real world surplus of this commodity, prices will respond to any decrease in output.

RECESSION CREAKS which recently troubled the country have been largely dispelled and the Canadian economy should show solid gains this year, although higher than desirable levels of unemployment continue to be a problem.

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Editorial Report

What About the New IWA?

AFTER 6 weeks of negotiation at Geneva, representatives of some 50 countries, including a strong delegation from Canada, were able to work out acceptable terms for the fifth International Wheat Agreement since 1949. When ratified by governments, the new IWA will come into effect on August 1 of this year, and will stay in force for the customary 3-year period. It remains open for signature in Washington from April 9 to 27. All 10 major exporting countries and 40 or more importing countries are expected to sign.

SAME OBJECTIVES AND OBLIGATIONS

Objectives of the new Agreement are the same as in the present one. They are: (1) to assure supplies of wheat to importing countries and markets for wheat to exporting countries at equitable and stable prices; (2) to promote expansion of international trade in wheat and the freest possible flow of this trade; (3) to encourage consumption of wheat generally; and (4) to further international co-operation in connection with world wheat problems.

Obligations under the new Agreement are also similar to those of the present one. During each crop year, while prices are within the Agreement's price range, each importing country undertakes to purchase from member exporting countries a specified minimum percentage of its total commercial purchases of wheat, and member exporting countries undertake, in association with one another, to supply the commercial requirements of the importing countries. At the maximum price, each exporting country has the obligation to supply to importing countries a quantity of wheat up to its "datum quantity," which is the average volume of commercial purchases made from it by the importing countries over a recent period of years. Importing countries, on the other hand, are freed from their percentage obligations when the price reaches the maximum, and are then able to buy commercial supplies from any source they wish. Actual selling prices are intended to fall within the IWA price range, but may fluctuate with market conditions.

SOME SIGNIFICANT DIFFERENCES

While the objectives and obligations are to stay the same, there are certain significant differences between the present and the new Agreement which are especially noteworthy.

First, under the new IWA, the basic minimum and maximum prices are to increase by 12½ cents per bu. to \$1.62½ and \$2.02½ per bu. in U.S. currency, respectively, basis No. 1 Manitoba Northern wheat in bulk in store Fort William/Port Arthur and Vancouver. This increase reflects both hard bargaining on the part of the exporting countries, and a recognition on the part of the importing countries of the change that has taken place in the supply position, particularly the supplies of quality wheats.

A second important difference of the new Agreement is that member importing countries, under their purchase obligations, have agreed to buy a larger percentage of their commercial requirements from member exporting countries. It is expected that about 85 per cent of the world's commercial wheat sales will be made each year under the new Agreement. This compares to an estimated 65 per cent of total commercial sales transacted under the 1959-62 Agreement, and only 25 per cent of such sales

under the 1956-59 IWA. It is believed that the more commercial sales that come under the terms of the Agreement, the more likelihood there is that it will achieve its objectives.

A third difference, and one to which Canadian representatives attach particular significance, is the strengthening of the safeguards for the commercial marketings of exporting countries by means of more precise definitions of what constitutes commercial purchases on the one hand, and special transactions on the other. Although the special transactions are not bound by the terms of the IWA, they are recorded under it. They have been growing faster than commercial transactions, and during the past 4 years have amounted to over half of the total trade in wheat. Member countries are obliged to inform the Wheat Council, which administers the Agreement, what measures have been taken so that the special transactions do not harm normal patterns of production and international commercial trade. It is hoped that such steps will help to keep to a minimum the replacement of commercial purchases with various concessional deals.

A final difference is the fact that the U.S.S.R. is expected to become a member exporting country to the Agreement for the first time. If Russia signs, it not only brings the trade of the third largest wheat exporting country under the IWA, but it necessitates a change in the voting rights of the Wheat Council. The Council consists of one delegate from each exporting and importing country. However, voting powers are in relationship to a country's importance as a trader. Under the present Agreement, Canada and the U.S.A. combined have more than two-thirds the votes allocated to exporting countries, and hence a veto power on decisions that might come to a vote. With Russia a signatory, this veto position has been lost due to the reallocation of voting rights. Not too much importance is attached to this development, however, because there has never been a recorded vote in the Council since it was formed.

IT appears, then, that the new IWA has emerged with benefits for both importing and exporting countries. With all the important sources of wheat covered, importers should enjoy, despite recent reductions in world wheat supplies, a greater assurance that they will be able to purchase their commercial supplies at equitable and stable prices. At the same time, exporters should benefit by reason of the increased price range, the increased obligations of importing countries, and the improved safeguards for commercial marketings.

There are, in addition, certain other advantages of a continuing nature. As a result of the renewed Agreement, the Wheat Council will be able to provide a most complete record of how wheat is being distributed throughout the world, and, through its secretariat, to supply periodic analyses of world wheat marketing, price and distribution trends. Such information is looked upon as extremely valuable to the participating countries.

The Council is also expected to continue to do what it can to encourage the use and consumption of wheat and wheat flour, particularly in the developing countries. This subject received a good deal of attention at Geneva, and a stepped-up effort by the Wheat Council is supposed to result.

ARE THERE WEAKNESSES?

Thus far we have been discussing the nature and strength of the new Agreement. What about the other side of the coin? Are there disadvantages or weaknesses? While we believe most Canadian grain growers favor the IWA, and the price stability it is helping to provide, it is well, at the same time, to be realistic about the Agreement in relation to world wheat trade.

It is true that the IWA establishes an internationally agreed price range within which exporting and importing countries are prepared to trade. It must be remembered, however, that since World War II, commercial export prices have been government administered and partly subsidized, with the dominant price decisions reflected in the price quotations of the Canadian Wheat Board and in the export subsidy rates set by the United States administration. What the IWA does is give a kind of legal sanction to such administered pricing. Price stability has been achieved to a large extent by the willingness and ability of the Canadian and U.S. governments to bear the burden of the costs of storage of huge wheat stocks while they are kept off the world market. The close co-operation between the world's two major wheat exporting countries has been looked upon with suspicion. To the extent that such co-operation tends to raise prices to commercial importers, it may serve to minimize their dependence on foreign wheat.

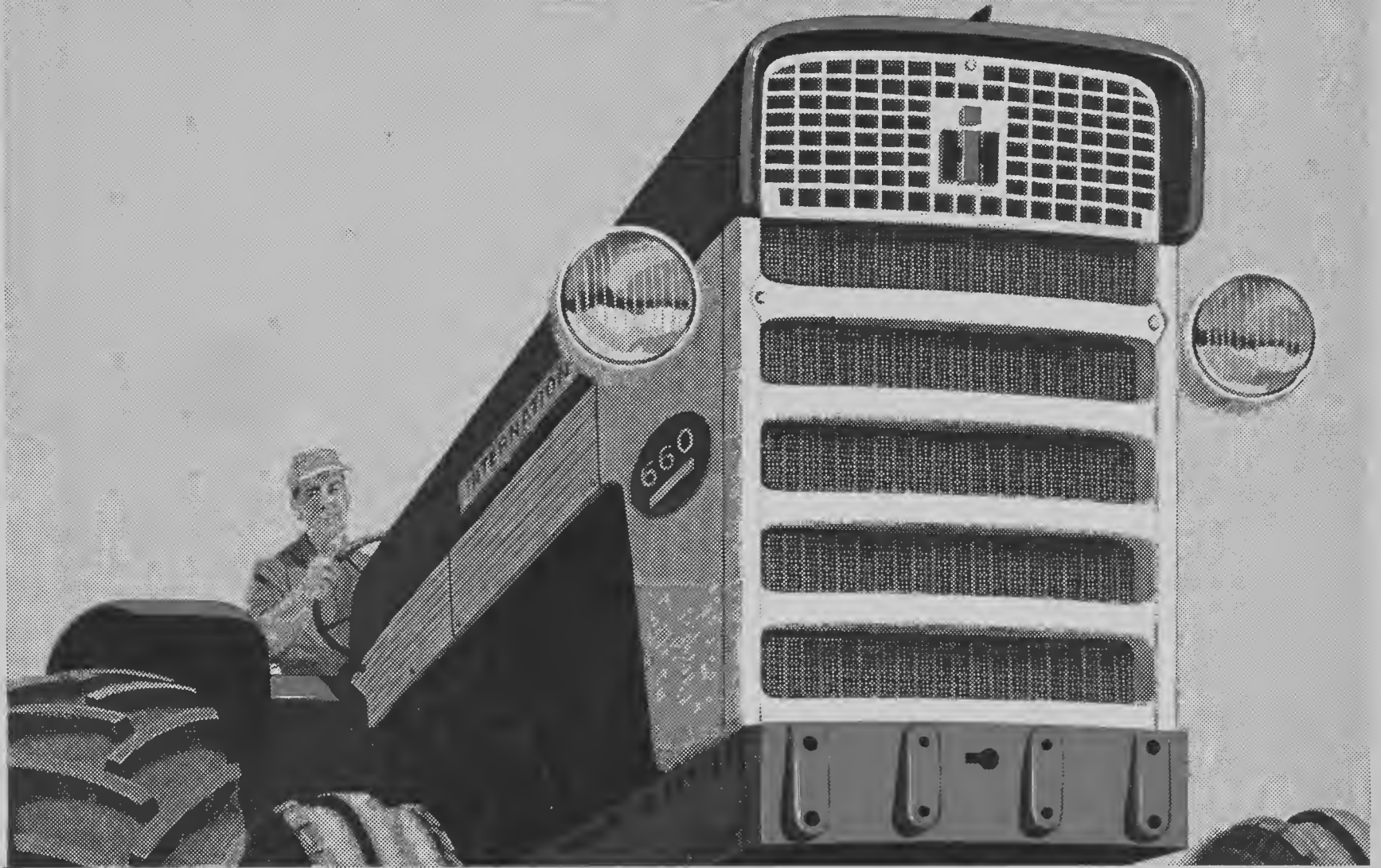
We should also not lose sight of the fact that since the first IWA was signed in 1949, it has embraced and condoned subsidized wheat exports from the United States as commercial transactions. This refers to that part of U.S. exports which do not come under P.L. 480. On an annual basis, this U.S. subsidy on so-called commercial sales has recently averaged 55 to 80 cents a bushel—roughly 30 to 40 per cent of the national average price received by U.S. farmers for wheat. Obviously such a practice continues to place producers in other exporting countries at a competitive disadvantage, as they are forced to compete with the Treasury of the richest country in the world. This, of course, is to say nothing of the U.S. P.L. 480 program which itself distorts the channels of commercial trade and restricts its volume, despite the efforts of the U.S. Department of Agriculture to the contrary.

MOMENTOUS PROBLEMS REMAIN

The IWA member countries subscribe to the aim that there should be the freest possible flow of trade in wheat. Their signatures to successive agreements have contributed little to this end. Nor have the agreements altered in any significant way the serious imbalance between supplies and commercial demand for wheat, or the basic factors underlying this situation. These factors, as described by the International Wheat Council itself, are continuing government intervention in production and trade, accelerated application of technology and the divergent trends in consumption. It is the strength and inter-relationship of these basic factors, the Council maintains, which have brought about the present state of imbalance in the world wheat economy. Unfortunately, there appears to be no significant change in their force and direction.

On balance then, the IWA notwithstanding, there are still momentous problems and complexities associated with international trade in wheat. In view of the realities of the situation, probably the greatest value of the IWA, and its administrative Council, is the forum it provides on a regular basis for the countries with a stake in wheat trade to come together and exchange their viewpoints on the problems that exist. It is only through widespread understanding of these problems, and the constant pressure for sound policies, that improvements are likely to occur. It is to be hoped that the Wheat Council can become a much stronger instrument to this end.

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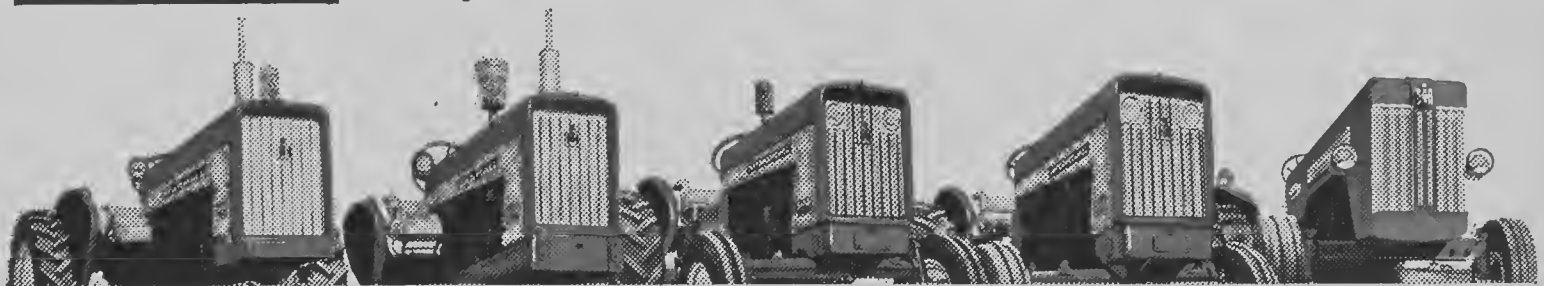
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What's Happening

EGG SUPPORT ON CLAIM BASIS

It has been announced by the Canada Department of Agriculture that egg deficiency payments are on a claim basis beginning March 31. Registered egg producers are therefore advised to retain all grading statements after that date, because

they will form the basis for any claim for deficiency payment and must accompany such claim. Should a deficiency payment be made at the conclusion of the egg-support year, September 30, a claim form will be mailed to registered producers. This move to put egg deficiency payments on a claim basis follows a similar one in the hog price support program. V

FEWER HOGS SELL COMPETITIVELY

The manager of the Alberta Live-stock Co-operative has claimed that "smaller and smaller numbers of hogs are being sold competitively" in his province. Mr. George Winkelaar, in addressing the joint annual meeting of the Manitoba Swine Breeders and Hog Producers Associations, at Brandon, pinpointed the cause of this situation as the procurement practices being developed by meat packers. He went on to say that it is questionable if sufficient numbers of hogs are being sold competitively

to simulate competitive bidding, and to arrive at a price which accurately reflects the supply and demand situation.

Mr. Winkelaar said that in many Alberta districts served by co-operative shipping associations, packers have developed buying practices for their "direct" connections which do not leave associations on an even basis with them. In fact, he said, it leaves the associations in a position where prices paid to their members are less than those received by non-members. The result has been that association handlings have gradually declined, with fewer hogs being consigned to public markets.

Mr. Winkelaar reported that in the most recent fiscal year, his co-operative sold 389,000 hogs, or nearly 25 per cent of the province's total slaughter.

He said that all stock sold by his co-op is sold competitively, nearly all through the auction method. "We believe our present method of selling is fair and equitable in that our hogs are available to anyone who wishes to buy, and strictly on a competitive open market basis . . ."

ACREAGE PAYMENTS TOTAL \$39.8 MILLION

The Canada Department of Agriculture has disclosed that 221,181 acreage payments have been made to Western grain producers valued at \$39,842,356 under the 1962 program. Average amount paid per farm was \$180. Payments are based on \$1 per acre, up to a maximum of 200 acres. Eligible were grain producers who held 1961-62 Wheat Board permits and who were permanently resident in Canada. Saskatchewan grain farmers received \$19.4 million; Manitoba, \$7.1 million; Alberta, \$13.1 million; and British Columbia, \$290 thousand. V

CROP INSURANCE— A WAY TO LIVE WITH INSTABILITY

"The basic problem in the prairies in the long run is not perennial low yields; nor is it a matter of excessive yields and chronic surpluses. Rather it is the unpredictable and disconcerting manner in which low yields alternate with high yields."

This was the basic conclusion reached by agricultural economist, Dr. J. C. Gilson, in a paper presented to the Agricultural Conference Week at the University of Manitoba in early March. He went on to say:

"The blunt fact appears to be that we must find better ways of using the good years to carry us over the poor years insofar as crop yields are concerned."

Dr. Gilson pointed out that while the average wheat yield for the period 1930-1960 amounted to 16.4 bu. per acre, the year-to-year wheat yield varied tremendously — a variation over which the individual farmer had little control.

For example, he indicated that the wheat yield dropped from average of 23.7 bu. per acre in 1953 to 12 bu. per acre in 1954. However, operating expenses, taxes and payments on the mortgage were approximately the same for both crop years. In the same year-to-year comparison, net farm income per farm tumbled from \$3,652 in 1953 to \$1,717 in 1954.

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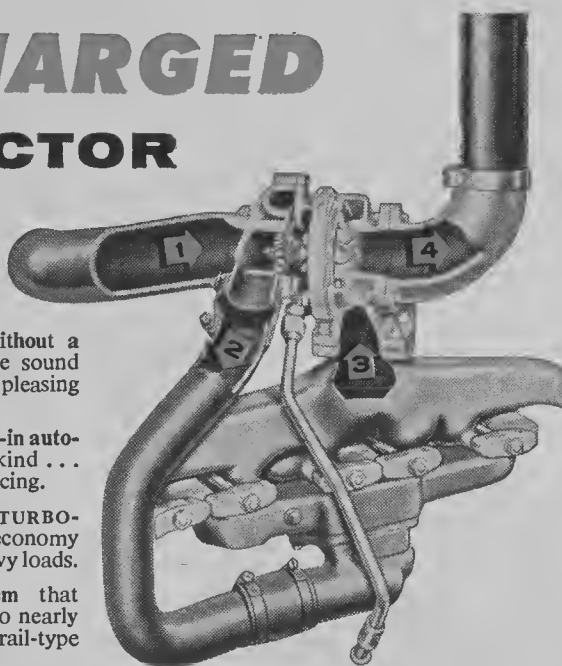
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He concluded that the instability of farm income in Western Canada has been a greater problem than the level of income, as important as income problem might be.

What we really need on the Prairies is some form of "ever-normal" granary, the speaker maintained. However, since it is not feasible to store actual grain over a long period of years, what we can do is to convert bushels of wheat into dollars, and store the dollars instead. This is what we actually do in crop insurance, Dr. Gilson said. In a crop insurance program, the bushels of grain stored in the "ever-normal" granary are really the crop insurance premiums. The grain withdrawn from the "ever-normal" granary in years when the yield drops below the average is really the indemnity paid to farmers in crop insurance. Hence, crop insurance is really a form of the "ever-normal" granary. It is the method of using part of the produce during the "seven plentiful years as a reserve against seven years of famine." In other words, crop insurance is a feasible way of adapting to, and living with, instability in the prairie region, Dr. Gilson concluded. V

CATTLE PRICE SUPPORT LEVEL LOWERED

The Agricultural Stabilization Board has announced that the 10-year base price for cattle for the period 1952-61 has been determined to be \$21.55 per cwt. for Good quality steers, live weight, Toronto. Cattle, of course, are one of the 9 mandatory products to come under the Agricultural Stabilization Act, which determines the support level for such mandatory products at 80 per cent of the base price. In this case, 80 per cent of the base price is \$17.25 per cwt.—which will be the effective support for cattle during the coming year. The support level for cattle, basis Toronto, for the past year was \$18.05 per cwt., while the actual average price paid for Good steers on the Toronto market was well above this figure at \$22.75. V

STRINGAM SAYS GRADES FOR BEEF NEED CHANGING

Dr. Elwood Stringam, head of the Animal Science Department, called in to question the present carcass grades for beef, in addressing the University of Manitoba Agricultural Conference Week audience. He stated that leanness, tenderness and flavor are the qualities of meat consumers want.

"It is also quite clear," Dr. Stringam indicated, "that tenderness and even flavor can be artificially produced, and that from the consumer's point of view a carcass high in its percentage of lean cuts is the ideal. Do our carcass grades for beef reflect this?" he asked.

"It is questionable," he continued. "Our Choice grade is a carcass well-balanced in depth from front quarter to rear; wide and even in width from the shoulder to rump; and must carry a fat sheeting from shoulder to hock, regardless of what this may be doing to the fat content already concealed in the shoulder and rib areas, and which probably helps to make the fore part of the front quarter the cheaper cuts."

Consumers have demonstrated in surveys their preference for lean cuts from Standard grade carcasses. This, coupled with the fact that the higher priced cuts of meat come from the topline hind quarters, indicates that grade standards need to be changed. The new grades should practically ignore the front quarter cuts of meat except the rib eye area and emphasize a "consumer type" carcass.

Breeders, Dr. Stringam stated, should emphasize performance testing in their production programs and include carcass tests to find leanness and tenderness since both characteristics are quite heritable. Heavy finishing, he explained, is within the control of feeding and management and should be stopped once buyers,

(Please turn to page 11)

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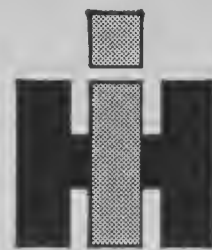
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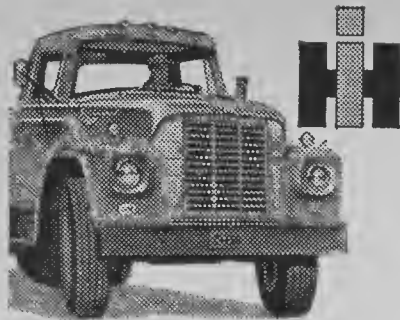
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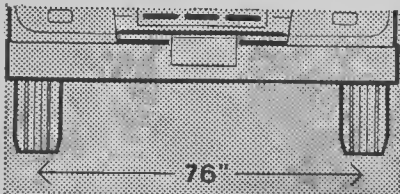
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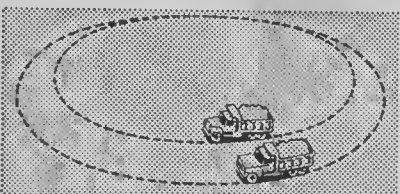


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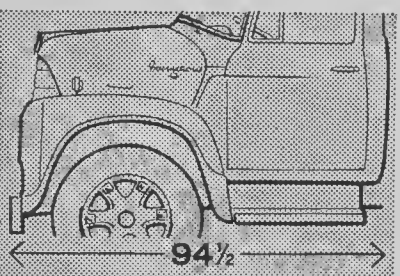
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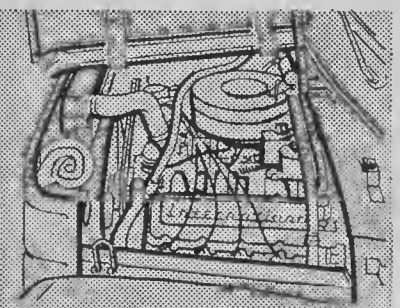
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(Continued from page 9)

graders and retailers decide to emphasize the kind of product the consumer wants. Retailers, he suggested, should reflect the consumer demand in the price they pay for meat and help to change carcass standards. V

PRICE SUPPORT POLICY FOR 1962-63 DAIRY YEAR

The Federal Cabinet has authorized the Agricultural Stabilization Board to drop the buying and selling price of butter from 64 to 52 cents a lb. effective May 1, while maintaining returns to the producer at the 64-cent support level. The Board will make necessary compensatory payments to producers of manufacturing milk and cream. It is expected that the retail price of butter should be between 56 and 59 cents a lb.

A decision has also been made to have the Board buy cheese at a price set in relation to the 52-cent purchase price for butter. Cheese milk shippers will receive the same compensatory payment as is to be made to those supplying milk for butter manufacture. This will keep the measure of support to cheese, milk and cream producers at the same level as is provided under the present support program.

The compensatory payments will be in addition to the 25 cents per cwt. subsidy now paid to shippers of manufacturing milk. They will not be paid on milk used in the fluid market, nor on surplus milk from shippers to the fluid market. The pricing of fluid milk, and any control of surplus production in this segment of the industry, lies within

the local jurisdiction in each province. Milk used for the production of concentrated milk products will continue to receive the 25-cent subsidy, but will not be eligible for the additional payments. V

PIGS WITHOUT PAS

Swine AI is now underway in a promising Ontario field trial

CANADA'S first full-scale field trial of artificial insemination with swine is underway. By late March, 76 Ontario sows had been inseminated by technician Ron Hofstetter of the Waterloo Cattle Breeding Association, and the first six litters had been born.

Dr. C. V. Barker of the Ontario Veterinary College, who is behind the trial, was confident enough to announce:

"If present results continue, it will be a successful trial. Of the 76 sows bred so far, only 6 returned for second breeding—a conception rate that probably matches what can be obtained naturally. The 6 litters born to date averaged 12 pigs. In fact, conception rate, farrowing rate, and litter size have all been high."

Dr. Barker added: "These results are very promising. But don't forget, this is simply a field trial, to work out the problems that may arise in getting AI of swine onto a commercial basis. Once we breed 100 sows, we will stop and evaluate what has happened."

While Dr. Barker was gratified, the most pleased person of all might well have been Waterloo dairy and hog farmer, Manassa Weber. It was in a deeply bedded pen in his big barn that the first litter was born in early March. And a good litter it was! Twelve of the 13 pigs born were robust and thriving at 2 weeks of age. A stream of visitors had come to inspect them. Another litter of 10 healthy pigs was born a few days later and these got off to a fast start as well. Explained the pleased Weber: "We bred 7 sows artificially, out of my 12-sow herd, and all but one seem to be safely in pig."

AI offers the swine industry great potential. It could help to rid the country of scrub boars. It could save farmers the expense of keeping a boar of their own, for just a few sows. And it could work a big improvement in hog quality if it makes the blood of top boars available to all hogmen, because hog quality, unlike that of beef carcasses, is one of the most highly heritable factors in livestock breeding.

THIS Ontario field trial is the culmination of a program of study and experiment that Dr. Barker has been carrying on for some years. He has traveled to Europe to observe progress being made by researchers there. He observed commercial AI units that tried to develop a program for swine, and quit, discouraged, when conception and farrowing rates failed to match those expected from natural breeding. Dr. Barker conducted his own experiments at Guelph. Landrace breeders provided him with boars, when they recognized the possibilities of commercial AI. A feed company provided rations. He gathered knowledge on how to collect, dilute and use boar semen. And last year, he decided the time was ripe for action.

Manager Roy Snyder of the Waterloo AI unit agreed to launch the program. Technician Hofstetter was sent to the O.V.C. to take instruction. Now, the trial will soon be ready for full evaluation.

While Dr. Barker is evaluating the technical success of the trial, the AI unit will be making its own assessment. It will have to resolve the question of whether or not to offer the service on a regular basis to district hogmen. Several factors will be involved. The unit will have to decide how many boars it would require; how they would be stabled; how much of a charge, per service, would be necessary to cover costs; whether hogmen really want this kind of service and would be willing to pay for it.

Despite the promise of this trial, Dr. Barker points out that several problems are apparent now. "Semen must be used the same day it is collected. If a way could be found to freeze it successfully, this would help. As well, while some dilution of the semen is carried out under present procedure, it is not to the same extent that bull semen is diluted. This restricts the number of services that can be obtained from a single boar."

It's too soon to say what the next move will be. But it is apparent that the day when AI for swine will be available to farmers in this country is drawing near.—D.R.B.



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THE COUNTRY GUIDE



The Crop-Chopper covers a 6-foot swath for green feeding, clipping, or shredding. Its double-edged knives are reversible for double life without resharping. Shift from transport to chopping is made from tractor seat. (New Holland)—HF 1.

WHAT'S NEW in HANDLING FORAGE

PART
ONE

(Another selection of forage equipment will appear next month)

For mowing and conditioning in one operation, this machine first cuts then lacerates and discharges hay with rodlike "hay flingers."

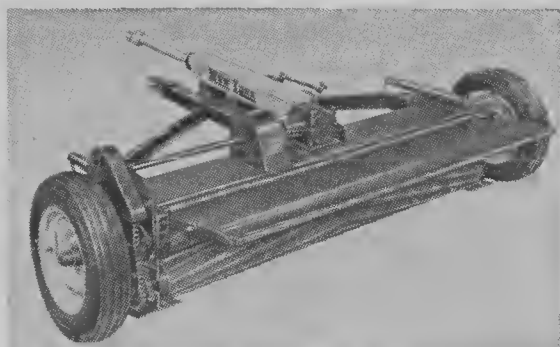
Hay is expelled loosely to speed drying. Material can be windrowed or scattered. It covers 3 acres per hour. (Wood Bros.)—HF 2.



Hay packer makes windrows into 2" x 2" wafers, dumps them into wagon, cutting tractor and man hours by 40 per cent. (Massey-Ferguson)—HF 3.



The Wheel-Loader picks up round or square bales gently and places them at convenient height. It works on rough ground too. (Richardson)—HF 4.



Conditioner has rubber and rayon cord on upper roller, steel flutes and tapered ends on lower, to reduce wear, improve action. (New Idea)—HF 5.



This self-propelled windrower for large acreages enables one man to cut and windrow 10 to 16 ft. swaths at up to 7.6 m.p.h. A crimper-conditioner attachment is optional equipment. (John Deere)—HF 7.



Three-point hitch mover has a 7-ft. cutter bar, swings back when it strikes objects, raises and lowers hydraulically. (Minneapolis-Moline)—HF 6.

The new Chop-All has chrome-edged chopper knives for all-season cutting without sharpening (inset shows knives).

Also new is the tungsten-carbon-faced cutter bar, said to last 20 times longer than ordinary bars. (Gehl Bros.)—HF 8.

Please quote reference HF1, HF2, etc., if addressing enquiries to The Country Guide about any equipment appearing on this page.



If It's Still Dry in the coming season

by **CLIFF FAULKNER and RICHARD COBB** Guide Field Editors

WILL it or won't it? We can speculate on the chances of rain during the growing season that is about to begin, but all we know for sure is what has already happened. Successive dry seasons have depleted moisture reserves critically in some regions in Western Canada, others are in slightly better shape but could use some good spring rains, and some may not have acute moisture problems. With this in mind, and without forecasting trouble ahead, we offer the following ideas. Many of these would be sound practices in any season, but they can be put to use particularly by those faced with a moisture deficiency and its accompanying difficulties.

We wish to thank soils, crops and livestock specialists in all the Prairie Provinces for their valuable help in compiling this material.

SOILS AND CROPS

Tillage and Seeding:

If moisture is deficient, keep cultivation to a minimum, go only deep enough to control weeds. Use implements that will keep any trash there is on top, preferably blade cultivators and rod weeder. Along with minimum tillage, use chemicals for weed control.

Cultivate early before weeds take much moisture from the soil. Ridge summerfallow with a heavy-duty cultivator if trash cover is lacking.

Seed early to take advantage of spring moisture. The seeding and cultivation can be done in one operation on clay loams with a seeder-discer, which probably makes the best use of moisture available in the soil. Also recommended is the semi-deep furrow drill, which will pile some of the dry soil aside and place seed down where moisture is, leaving a cover of 3 to 4 inches over the seed.

The press drill is recommended for light land because it packs the row as it is planted.

A lower rate of seeding may help when moisture is low. It means that fewer plants would compete for whatever moisture there may be.

It is considered hazardous to seed stubble land in a grasshopper forecast area. Hoppers will have laid eggs in the stubble, in which case it is a good idea to blade and summerfallow it.

Summerfallow has shown its value, especially in dry periods and in the brown and light brown soil zones. Cultivation should be sufficient to preserve trash and a lumpy surface, using herbicides to control weeds.

If, in midsummer, a heavy volunteer crop appears, it might pay to let it grow for controlling erosion. Some let Russian thistle grow on summerfallow as soil protection and emergency feed.

Soil Protection:

Where trash is light, protection can be given by use of cover crops of wheat, oats or barley, seeded at ½ bushel per acre around August 15. Fall rye is another effective cover crop when seeded at 1½ bushels per acre. Cover crops can be grazed in the fall without jeopardizing their effectiveness.

Corn is a useful protective crop and an efficient user of moisture. If planted on summerfallow in rows—twice the width of a regular cultivator apart—corn serves as a windbreak and is an additional source of cattle feed. Cattle can be turned in there during the fall, or the corn can be harvested. There might be a slight dip in yield in the next crop, where corn rows have been, but this small penalty is far outweighed by the advantages.

Remember that if cropping practices leave the soil vulnerable to drifting, it is better to change those practices rather than lose soil. Now is a good time to consider such conservation measures as strip cropping, cover crops and trash management. Techniques developed since the thirties mean that dry conditions need not be so disastrous nowadays.

Forage Crops:

Don't put off seeding forage just because there may be a dry season. Forage is badly needed. Where soil moisture reserves are low, this will not have an immediate effect on new forage seedlings, which depend mainly on current moisture—the moisture that falls. Seed a little deeper than normally so that plants will have access eventually to deeper moisture.

Fertilize hay and pasture right now, if possible, enabling the crops to make the best use of spring moisture.

There is no reason to abandon green manure programs. In fact, they provide an extra source of hay in addition to their role in fertility.

Choice of crops for this season can be related to the pounds of water they need to produce one pound of dry matter forage, as follows: millet 260 lb., corn 370, sugar beets 380, wheat 500, barley 520, oats 650, field peas 750, flax 780, sweet clover 730, brome 830, alfalfa 850. These water requirements will rise or fall according to the level of fertility, which promotes more efficient use of moisture as fertility rises.

In a dry year, more forage is obtained from cereals than from perennial forage crops. Low rainfall in May puts the perennials at a disadvantage. If adequate rains don't occur in May, sow a cereal crop for forage as soon as possible. Oats are generally recommended for quick forage but, although oats make the better quality forage, a wheat-barley mixture tends to give higher yields. Millet is another recommended forage crop. By seeding forage early on last year's summerfallow, there is a chance that an improvement in the moisture situation may result in a choice of grazing, green feeding, or harvesting grain.

If water is available for irrigation from a dugout, slough, or stream, the best forage returns will come from alfalfa. Estimated cost, including irrigation equipment and labor, is at least \$2 per acre inch of water, amounting to about \$20 for 1 to 1½ tons of hay per acre. Need and the price of hay may determine whether irrigated forage is economical.

Fertility:

Don't withhold fertilizer just because it's a dry year. Last year demonstrated that fertilized land can come through a drought better than land without fertilizer. Provided that there is the prospect of getting a crop, fertilizer will help to make more efficient use of whatever moisture there may be. Fertilizer also promotes a heavier growth of straw for better trash protection.

Similarly, summerfallow helps to maintain fertility and therefore improves the use made of available moisture.

LIVESTOCK

Pasture:

Ideally, livestock should be kept off pasture until growth reaches about 6 inches, which will give grasses a chance to recover from a tough year. However, where early grazing is unavoidable, try to confine livestock to a small, fenced area where the damage will be limited.

Take a look at pasture management and try to select a program that will work best under present circumstances. Consider rotational grazing, continuous grazing with supplementary feeding, strip grazing, zero grazing, or a combination of these methods.

Under dry conditions, livestock should probably be moved to new ground from day to day. When a base maintenance ration of hay can be fed on pasture, there is little waste.

Hay:

The most economical way to take off a forage crop is to cut it as hay. If there is any slough land or irrigated land, avoid grazing it, otherwise too much will be lost on account of trampling.

Keep high-producing land for hay and put stock on dryland pasture, if there is a choice. Where there is no dryland pasture, it may be necessary to cut everything as hay and to run the herd as a feedlot operation.

A piece of slough land in the pasture is probably of more use if it is fenced off for hay production.

Rations:

Concentrates and roughage supplement each other, and both are generally supplementary to pasture. It is not practical to attempt livestock maintenance with concentrates alone but, as a supplement, they can extend the supply of roughage or make it possible to use roughage of lower quality.

During an emergency, livestock in fair condition need only enough feed to maintain weight. Thin stock should be given sufficient feed through their pregnancy to offset birthweight losses—a gain of 150 lb. for cows and 18 lb. for ewes above their thin condition. The best feed should be saved for use just before and after giving birth.

A phosphorus deficiency may develop when grasses mature and dry out. Where the water supply can be controlled, such as from wells, phosphorus can be added to drinking water. Phosphorus compounds recommended for stock water are disodium phosphate (crystalline or anhydrous) and anhydrous monosodium phosphate. Phosphorus may also be given in a feed supplement—as is generally the case in winter—such as bonemeal fed with salt.

(Feeding values and make-up of various rations were given in "After a Dry Season" [The Country Guide, September 1961]. Copies are available on request.)

Management:

If limitations on feed are severe and livestock numbers must be reduced, sell the older and less desirable animals first.

When there is lack of pasture, it is better to feed in a corral or drylot where animals can conserve energy by not needing to travel to their feed and water. This applies particularly when there is valuable breeding stock that must be kept.

Calves and lambs should be weaned as soon as possible if moisture conditions are really bad. Late calves are better sold to prevent cows from nursing them during winter. It is easier to winter dry stock than wet stock. Heifers in calf need more care than cows and could be sold with older animals to avoid wintering.

Livestock must be well tended to make the best use of feedstuffs, whether they are in pens or on pasture. In pen feeding, separate animals according to age, strength, horned, dehorned, bred and unbred.

Troughs should be used to lessen waste. If supplies are very short, feed only once daily. Troughs should be long enough to allow all animals to feed at the same time.

Water:

Reassess water storage in the light of last year's conditions. If water for livestock ran short last year, see to the improvement of water collection facilities on the farm—PFRA and provincial departments of agriculture can help here.

Improvements can be made by deepening existing dugouts and developing new ones, and by erecting small dams. A great deal of surface water is wasted away in watersheds or through evaporation from land-locked basins.

When planning storage, make sure that the subsoil is capable of retaining water, that there is sufficient drainage area to fill the storage, and that contamination from farmyards and other sources will not occur during the filling.

Don't overlook the possibilities of subsurface water. It is usually more economical to dig a well than to construct large surface storage, provided that there is a suitable ground water supply.

Ground water levels recede as a result of extended dry periods. Yields from wells can be best increased by deepening them. ✓

Weather Forecast for the Growing Season

Prepared by DR. IRVING P. KRICK and Associates

General Statement

Overall moisture from May through August will range from below normal in central Alberta to near normal in extreme southeastern Alberta and western Saskatchewan. Eastern Saskatchewan and Manitoba will start out dry, but will likely experience above-normal total rainfall from the period June through August.

Highlights

May: Conditions will be rather dry with rainfall more frequent after mid-month. The timing of this precipitation in areas east of Alberta may assure crops of a good start, despite the dry outlook.

June: Dry in western Alberta and approaching normal in southeast Alberta, near the Alberta-Saskatchewan border. Above-normal rainfall is expected in most of eastern Saskatchewan and Manitoba.

August: Weather patterns in August will foster fairly frequent showers throughout all of the Prairie Provinces. The month's rainfall will be above normal. Cold weather at the end of August, followed by frequent cold intervals in September, will stop plant growth in most localities in the Prairie Provinces. Thus, an early planting date and, consequently, an early harvest seems the best approach in most areas.

(A complete weather forecast for the 1962 growing season, prepared specially for any individual farm in the Prairie Provinces, may be obtained for a fee by writing to Irving P. Krick Associates Inc., 460 South Broadway, Denver 9, Colorado, U.S.A.)

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CANADA THISTLE

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and

How they would like to see it done

RAILWAY branch line abandonment is not a new subject on the farm scene. However, now, with the release of Volumes I and II of the MacPherson Royal Commission on Transportation, and the recommendations they contain concerning the matter, it will be a great deal more topical and urgent among farm people than ever before.

The gradual but widespread abandonment of branch lines proposed by the Commission, if carried out, cannot help but be a disrupting influence of considerable magnitude. It will affect families, communities and businesses that have been tied in one way or another to rail operations.

It is important under these circumstances to know what prompted the Commission to make the recommendations it did, as well as the nature of its plan for implementing the recommendations. This article attempts to draw from the Commission's report the answers to the more pertinent questions which arise about branch line abandonment.

Why, for instance, are branch lines uneconomic to operate?

Obviously the density of traffic must not be sufficient to make a great many branch lines pay their way. Why hasn't heavier traffic developed?

Railways, at the time when branch lines were threading their way throughout the country, were in a monopoly position for overland transport. There was no other mode of transport that could move freight, express, mail and people from place to place as quickly or as readily as trains. Branch lines were considered necessary and desirable as a part of a complete transportation service. They were built to provide "feeder line" functions to the railways' main lines.

However, as the years unfolded, traffic on many branch lines either failed to increase, or actually decreased in spite of the fact that total railway freight tonnage continued to grow.

The Commission gives two main reasons for this. First, it points out that the development of certain sections of the country didn't materialize as anticipated when branch lines were being built. Second, the advent of motor transportation siphoned off much of the growing freight traffic which might otherwise have been carried by railway branch lines.

The Commission did not try to determine how much mileage of unremunerative branch line track should be removed from service or where that mileage is. It did establish, however, a rough measurement of the total mileage considered to be unprofitable. This calculation was based on railway costs and average revenue figures for line operation. It suggested that it is not unreasonable

to assume railway lines on the average would break even with an annual traffic density of 100,000 net ton-miles per mile of track. It appeared to the Commission that each of the two railways operate about 4,300 miles of track below this density figure.

What has been the actual trend of railway traffic over past years?

This is another question the Commission studied. Branch and main line traffic for both railways by regions was compared for a 30-year period. The Commission was able to reach these conclusions:

- There has been a substantial increase in demand for rail transportation during the period. In the case of the CNR, the tonnage it carried increased by 36 billion gross ton-miles from the 1926-35 period to the 1956-59 period. Significantly, of this amount, 35 billion gross ton-miles accrued on main lines, and only 1 billion on branch lines.

- Due to the resource base of the area, alternative nearby rail facilities or the substitution of other modes of transport, there is a large part of the branch line mileage which contributes little to total tonnage moved, and has failed to show significant improvement in this regard in the last 30 years. These branch lines occur in all regions of Canada, but the greater mileage occurs in the Western region.

It will come as a surprise to many to find, for example, that while branch line mileage is a substantial part of total rail mileage in each region, branch line contribution to total traffic has been small. For the CNR system, branch lines account for 40 per cent of the track mileage, but only 4.4 per cent of the total ton-mile traffic. Moreover, branch lines are carrying a smaller percentage of total tonnage now than they were 30 years ago. The share of branch line to total traffic on the CNR declined from 5.7 to 4.4 per cent from 1926-35 to 1956-59.

- In the future, the transportation needs of most areas now served by uneconomic branch lines can best be met by trucks, integrated where necessary with other nearby rail lines.

The Commission also looked at trends in the main sectors of the economy to see if the demand for branch line services is likely to increase. After considering the agricultural, mining, forest products and manufacturing industries, the Commission concluded that the demand in the future will be for main-line rather than branch-line hauling for the most part. Branches when required will usually be for specific industries having to move large tonnages that require little terminal handling. Moreover, in looking at technological developments, the Commission stated that the

Special Report

by **LORNE HURD**
Editor

evidence points to continued improvement of rail efficiency on high-density lines and little improvement on low-density lines.

What did the Commission conclude should be done about the light-density branch lines?

Well, you will recall from Volume I of the Commission's Report that such light-density lines, if continued in operation, would, because of their uneconomic nature, continue to impose a burden on shippers. It was recommended that this burden be removed by the abandonment of the unprofitable lines. To avoid the disruption that such a program could bring to labor, shippers, investment tied to rail, as well as the individuals and communities affected, the Commission recommended that this program of abandonment be spread over a period of time. No time limit was set, but the Commission expressed the view that it could be largely completed in 15 years.

To relieve shippers of this burden during the adjustment period, the Commission recommended "that, under the administration of the Board of Transport Commissioners for Canada, an annual grant of \$13 million be made available to the railways to provide compensation for losses actually incurred in the operation of lines which the railways are prepared to abandon, but which shall be continued for a period of time to be determined by the Board."

In perspective, then, this recommendation is intended to meet the immediate need to release the railways and railway shippers generally from the burden of uneconomic lines. The long-run need is to adjust the railway plant in line with traffic demands.

How does the Commission propose that its recommendation be carried out?

The essential elements of the Commission's administrative plan for implementing its recommendation are as follows:

1. The branch line abandonment program requires acknowledgment by the railways and public authorities that it is necessary and desirable in the interests of efficient transportation.

2. Graduating the process of abandonment calls for an assessment of the time necessary to effect it. The assessment is properly made through the process of a public hearing.

3. Where it is evident that substantial abandonment must take place, the overall timing and progress of such abandonment should be made known to those affected. As a general condition such abandonment should not occur less than 5 years from date of application for abandonment.

4. A Branch Line Rationalization Fund shall be set up, from which the Board of Transport Commissioners will be authorized to pay annually losses actually incurred on uneconomic branch lines. The Fund will be established for 15 years. As the two railways get nearer and nearer to operating only paying portions of lines, the total subsidy will tend to disappear.

5. The Board will have discretion to apportion the Fund to branch lines between the two railways. It will not necessarily be equally divided. As an abandonment date is reached and the subsidy thus expires, the sum involved in that line will become available for application to subsequent lines for abandonment.

6. Holding the total subsidy to \$13 million will help to keep the speed of abandonment reasonable, make the railways choose their worst lines first and allow the Federal Treasury to budget with some accuracy.

(For the Commission's recommendations on procedure for abandonment, see page 76.)

Control Those Winter Winds!

Wind may pile up snowdrifts, whisk feed out of mangers, and create drafts in the loafing areas of open front buildings. Guelph engineers can now help overcome these problems

by **DON BARON**

Field Editor

WINTER brings snow and wind to George Robertson's feedlot, creating problems that he scarcely imagined a few years ago when he was planning his buildings. For he built them when Ontario farmers were suddenly discovering that cattle don't mind cold air—that it's easier and often cheaper to let cattle run in open sheds, and to feed them out-of-doors, than to winter them in stables. He has found out since, of course, that it isn't quite that simple.

For the wind does surprising things in rushing over and around farm buildings. He has had drifts pile up right inside his open barn. He has had drafts swirling through the barn, bringing discomfort to the cattle. The snow pile-up in the yard has created clean-out problems too. In fact, he now boards over much of the front of his open barn during winter.

But Robertson hasn't given up on open-front housing. "It's like anything else," he says. "You have to search out ways to make it work for you."

So when he bought another farm last year, and decided on another feedlot, he and his dad, Elmer, did some careful planning.

They visited dozens of farms in Ohio and Ontario, gathering up ideas for new buildings. They used ideas of their own too.

And they did something else. They learned from district engineer, Tom Brown, of the Ontario Department of Agriculture, about a wind research program being carried on at the Ontario Agricultural College.

Prof. Frank Theakston, and John A. Underwood had devised a system whereby they could determine the patterns of wind and snow, of drifts and drafts, around simulated models of farm buildings. In effect, they could prevent farmers, who went to the trouble of asking for some help, from making major errors in establishing new buildings.

The research program went even further. For it could also be used to help farmers who were encountering problems of wind currents playing

havoc with their existing buildings. The equipment could be used to search out ways to remedy at least some of the troubles.

"Just what we want," said the Robertsons. They persuaded the engineers from O.A.C. to test their buildings.

HERE is how the tests are made. The engineers make clear, plastic models to scale of the proposed or existing buildings and set them on a circular plastic board. They place this in a water flume which they built. This flume is a tank, 12 ft. long, 18 in. wide and 18 in. deep. Water flows through the flume at an even rate. Fine white sand is sifted into the moving water, taking the place of snow. The sand piles up in drifts, in the same manner that snow piles up around similar buildings in a storm. Turning the board on which the models are mounted has the same effect as changing the wind direction.

Robertson's plan called for three buildings—a hay shed, and two open-front barns grouped in the shape of a letter U. The hay barn was located to the north, with the two facing open-front buildings, only 35 feet apart, extending from it to the south, creating a feeding area that was largely enclosed. Roofs sloped outward to carry runoff away from the yard, and to try to direct wind currents up over the yard, rather than down into it.

The engineers tested the plan, and were able to suggest a couple of improvements. Storms from some directions, they found, would create drafts in the pole barns, so they recommended building a partition across the center of each barn. They also recommended planting shelterbelts to the west and south of the buildings, 150 feet or so back, to take at least some of the snow out of the approaching wind.

They found that a short canopy extending from one pole barn to the other, right along the hay barn, would help to roll northwest winds up and over the yard too.

The buildings are up now, and through their first winter, Robertson has found that his new buildings seem to be quite satisfactory.

OAC RESEARCH EQUIPMENT



O.A.C. photo

Scale models of buildings are set on table in this water flume. Fine sand is sifted into water as it passes through the flume. This duplicates patterns of wind and snow, drafts and drifts, helps the engineers to find building weaknesses.

With the facing pole barns so close together, it wouldn't be difficult to roof over the entire structure. "Why not do this and be done with it?" we asked Robertson.

"If we can control snow and drafts, the cattle are better outside," he says. "They are more comfortable. They don't get damp. Litter stays dry."

Professor Theakston admits that all open buildings have something of a snow and wind problem, and it isn't possible to solve it every time. New building designs and roof shapes can cause trouble. Some farmers have given up, and simply boarded in the front of their buildings. But

PUTTING THE RESEARCH TO WORK ON THE FARM



Left: The canopy-type roof over the feed alley, and adjacent to the hay barn in the rear, was included in this beef cattle structure on the Robertson farm to roll northwest winds up and over the feed yard.

[Guide photos

Right: George Robertson and son Stevie look at the partition which was built across their new barn when the Guelph flume tests showed it would cut down on drafts.



CONTROL THOSE WINTER WINDS—(Continued)

Theakston can make several general recommendations now, regarding wind:

- Tower silos must not be located too close to the front of open buildings. If they are closer than 35 feet, the gap will fill up with snow. The silo should be downwind from the barn too.
- Leave 100 feet, at least, between buildings.
- Partitions placed inside open front buildings, at intervals of 20 feet, prevent wind from sweeping in through the building, and help keep out snow.
- The open front of a building should face away from the wind—usually south, to let in the sun.
- Since snow piles up behind fences, don't run any fence straight out from an open building.



Robertson points to facing on front of barn. It is tipped out at bottom to roll drafts up and out.

SEVERAL Ontario farmers besides Robertson have made use of the wind tester. Dairy farmer Don Hart, of Woodstock, for instance, was one of the first farmers to turn to loose housing a few years ago. His farmstead includes a pole barn, a hay feeder, and a tower silo in the middle of a yard that Hart says is much too big.

His pole barn is 150 feet long—built to handle his 100-cow herd. It's arranged with straw storage inside, along the back wall, and the resting area along the front. The Guelph test showed the wind going through that loafing area as if it were a tunnel. The engineers devised a simple solution.

"Store the straw in the center of the building, from front to back—breaking that long sweep of the wind," they said. They also showed that by partially boarding over the vents at each end of the building the wind could be further controlled.

Hart is so well sold on the wind tester that he has used it for another project. He intends to establish a beef feedlot, and he has already had the building plan he intends to use tested.

Unfortunately, the wind tester doesn't always provide an easy answer. For instance, John Westbrook, at Clinton, has a 30-cow dairy herd, but he plans to expand that herd. He built a loose-housing setup for it, with a central yard, wide open on the south end. In the center of that yard, he built his tower silo. On windy days, a draft swirls through the yard, and sweeps back through the pole barn where the cows should be loafing. He has boarded in much of the open front of the barn as a result, but this brings dampness problems.

He figured that moving the silo would help, but when his plan was tested at Guelph, it showed that this would be of little use. In fact, the water sluice duplicated Westbrook's problems, but it couldn't suggest an easy answer.



To block winds in the 150-ft. Don Hart barn, OAC engineers suggested storing straw in center bays.

Maybe Westbrook isn't alone in having a problem which doesn't lend itself to easy solution. For as Don Hart says, it's just recently that people have begun to look at these drafts closely, and search for new ways to prevent or control them.

How much damage do these roving winds really do? Hart says that there won't be more than 3 or 4 days during the winter when they become so severe as to cause his cattle real discomfort. He's not sure how much expense is justified in trying to deal with it. But engineer Tom Brown, who travels through a territory known as Ontario's snow belt, has found too many problems in open-front buildings to be anything less than concerned about it. "In the snow belt, open front buildings should be built with caution," he states.

Even recognizing the limitations, it is apparent that the O.A.C. engineers, who built the flume, have come a long way in providing help to livestock farmers in dealing with the antics of winter winds.

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OCCUPATION

How to Tackle LANDSCAPING

Woody ornamentals can make the farm home a better place to live in



[Guide photo]

Dwarf mountain pine is suitable type of foundation planting for north and east exposures of Prairie farm homes.

THE days of the naked house standing out on the bald prairie, with only barns and granaries for company, are coming to an end. Farm people have become particular about the place where they live. They want it to have a welcoming look. They want a pleasant place where they can relax; a place to be proud of. One way of realizing their wishes is through landscaping, and this is where woody ornamentals come in.

The first consideration is to provide a setting for the home, which will be attractive from the outside, but can be enjoyed from inside too. The second consideration is hardiness—the selection of ornamentals that can survive — and this means stock bought from local nurseries.

It should be noted that some shelter is needed before much of this material can be grown successfully. But make certain that ornamentals are planted far enough away from any shelterbelt to permit the use of a cultivator, which will eliminate the need to hoe. The soil should be prepared a year in advance and summerfallowed before planting.

USE OF ORNAMENTALS

Turning to the ornamentals themselves, there are three main types, each serving a different purpose. *Foundation* plantings, as the name suggests, are those that are grown against the house. *Specimen* plantings are ornamentals spotted here and there in the garden for special effects. *Border* plantings are those set around the edge of the garden.

Dwarf evergreens are popular as foundation plantings, but are suited only to north and east exposures in Western Canada. Good examples of dwarf evergreens are the cedars, dwarf mountain pine, and junipers. Select deciduous material for south and west exposures. Ranch-style homes need sprawling or dwarf types, but taller houses can stand more growth, especially to frame the building at the corners.

Generally speaking, the front of the house should be fairly open. Specimen trees can be attractive on the lawn, but they should not overshadow the architecture of the house. Use tall shrubs or small trees, such as Japanese lilac, Amur chokecherry, or birch (which needs a lot of room).

by W. A. CUMMING

Horticulturist, Morden Experimental Farm, as told to RICHARD COBB

Avoid elm, maple, spruce, or pine. The place for bigger trees is in the background. On the other hand, ornamental crabs and flowering plums are excellent small trees for specimen plantings.

Almost any shrub can be used in border plantings, with the taller ones at the rear. Particular care should be taken in placing material that has coarse leaves or colored foliage. These could be used to attract the eye to a focal point, such as a gate, garden furniture, a vista, a lake, or a hill. There should not be many of these focal points in the garden.

ACHIEVING CONTRAST

It is unwise to buy plants purely for their flowers. The flowering season is short, so some account should be taken of fall colors, fruits, colored bark, and interesting branching that can look attractive in winter.

For bark color, there are dogwoods, willows, or birches; for fruits, there are crabapples, buffalo berries, highbush cranberries, or some shrub roses. Fall leaf color can be provided by Amur maples, sumacs, or highbush cranberries. Evergreens are excellent for retaining interesting shapes all year. Among the deciduous trees, when the leaves have gone, the winged burning bush has an attractive silhouette, and some hawthorns produce zigzag branches and bright thorns.

Flower borders are quite effectively backgrounded by shrubs but, generally, it is as well to avoid poplars or willows close to flowers, and evergreens tend to take a lot of space. It really depends on the water supply how close flowers and shrubs can be. Just a few of the heavy-rooted trees are troublesome. But the tall, heavy feeders are usually at the back, and the smaller shrubs in front do not take much.

Avoid straight lines. Borders are far more interesting if they follow natural curves. If there is sufficient room round a driveway, plant well back from it so that snow will not pile up there. If you plant beside a walk, avoid straight lines again. An ornamental can be set in a corner, or the walk can curve around it.

WHAT ABOUT HEDGES?

Hedges are good for dividing the vegetable garden from the outdoor living area, or for border plantings where there is no room for shrubs, or for cutting off the barnyard from the garden, unless there is a shelterbelt. Hedge plantings are often used as foundation shrubs beside long, low bungalows. But remember that a house is meant to be seen. Use hedges mainly as dividers and property-line screens.

Start with a landscaping plan and carry it out over several years, rather than all at once. It need



[Guide photo]

Weeping willow is suggested for specimen planting of ornamentals that should be spotted here and there to produce special effects.

not be a costly program and the returns for the investment are high. Farm family life is enhanced and, if the landscaping is well planned, it need not be a big chore to maintain it.

Clean cultivation is essential, particularly where water supplies are limited. Grass should be kept off the borders, and specimen trees should have circles of earth around them. A good watering, once or twice during the summer, is better than frequent light sprinklings. Evergreens in particular need to go into winter with plenty of moisture, so water them well in the fall.

The choice of varieties depends on the region. The provinces have their own lists of recommended varieties, which are available on request. Nurserymen's recommendations are usually sound as to types adapted to a district, and also on layouts. But be sure this advice comes from the man who actually grows them.

The choice of material is wide, and is always increasing. So the possibilities for beautifying the farm home with woody ornamentals are almost boundless, and well worth the effort. V



[C.D.A. photo]

Japanese lilac looks well on the lawn, provided that the front of the home is kept fairly open.



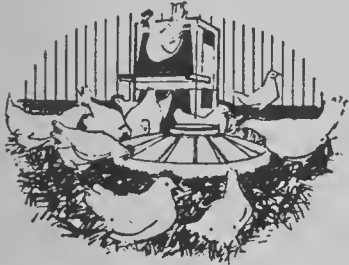
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Pole-type storage for potatoes on the Christian Brothers farm at Grand Falls, N.B., is insulated and has the specially designed ventilation. End doors allow trucks to back right into the potato bins.



[Guide photos

The "Look-Ahead" Potato Storage

by **DON BARON**
Field Editor

All-winter storage costs only about \$1 per barrel — and it is gaining popularity.

NEW BRUNSWICK'S potato industry is more than holding its own in the furious fight for markets in this country, and one of the big reasons for this could be the way growers there are modernizing their storage and handling. For instance, a newly designed potato storage building has been built by several of the province's growers in the past 2 or 3 years.

One of the first to be built was on the farm of the Christian Brothers at Grand Falls. The Brothers grow about 120 acres of potatoes each year, but they used to have to sell much of the crop in the fall for lack of storage. In 1960, they went to engineer Arnold Roberts of the N.B. Department of Agriculture for advice on the kind of storage to build. He drew up plans for them. Now, with the storage built, the farm has potatoes for sale all winter long.

It's a pole-type building, with capacity for 14,000 barrels. Although built above ground, it has adequate insulation to provide frost protection the winter through. It is less expensive than the traditional bank barn potato house. And the handling system that has been adapted for use in it practically eliminates bruising.

Engineer Roberts points out another feature too. "Because of the dirt eliminator that is used with the piling system inside, it should tie in beautifully with the mechanical harvesters that are winning popularity today," he says.

The handling system is suitable for receiving potatoes either in barrels or from bulk handling trucks. Because of the air control system, Roberts says the building is ideal for storage of processing potatoes too. All that would be required for this purpose would be to add an automatic oil-fired furnace.

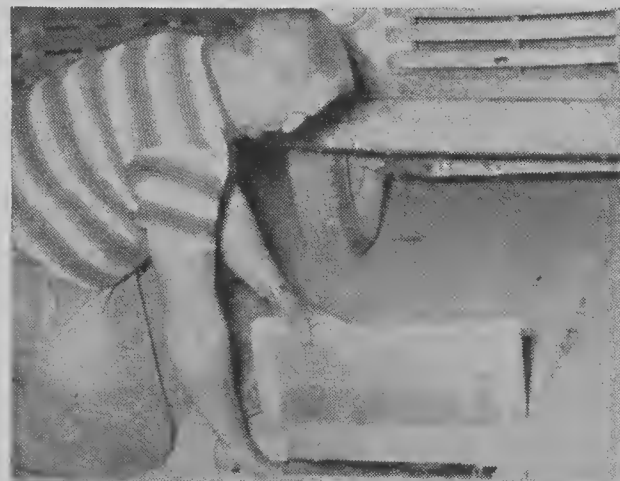
Despite the interest in his newly designed building, Roberts says that too many growers are failing to plan for the future when they come to build.

PEERING into his crystal ball, Roberts predicts: "A combine harvester will be developed that will eliminate the barrel, and potatoes will be handled in bulk trucks or pallet boxes. Except for our stony land, they would have been here before this.

"That's why," he went on, "storage should be adaptable to this kind of handling. They should also provide



A crew taking potatoes from the truck and dumping them straight into the mechanical dirt eliminator.



Floor ducts deliver the air to the bottom of each bin.

suitable conditions for the storage of potatoes for processing. More and more of our potatoes will undoubtedly be going into this market. Many growers in recent years have refused to install the below-floor ducts needed by a modern ventilation recirculation system. But such a system is essential, and it must be combined with a heating system to enable growers to deliver potatoes to processors, that will cook on arrival.

"We know that our district agricultural engineers will be called back to design heating ventilation systems for many of these houses within the next 2 years. Breaking concrete floors is an expensive job.

"Tradition is important when it keeps us on the right track," said Roberts, "but when it makes us miss the train, it is a deadweight that agriculture cannot afford to carry."

(Plans for the potato storage are available from: Mr. Arnold Roberts, Engineering Branch, N.B. Department of Agriculture, Fredericton, N.B.)

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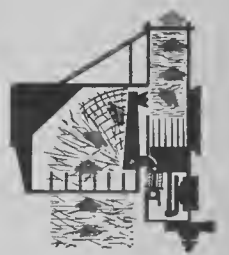
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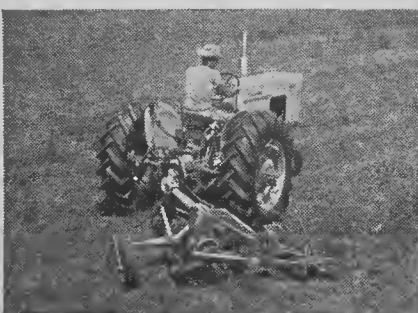
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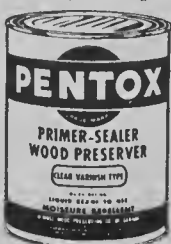
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No. 43

by CLARENCE TILLENIUS



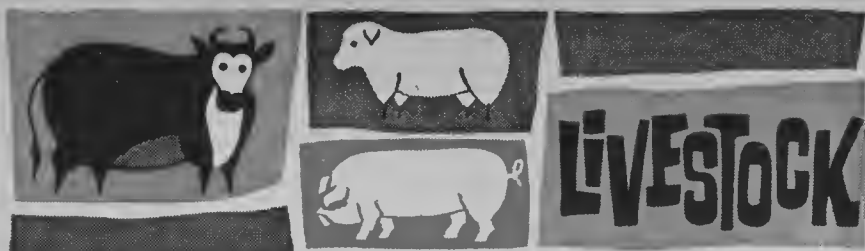
CLARENCE
TILLENIUS

THE Canada lynx is master of the art of spying unseen. So silent is his approach that no faintest rustle ever warns of his coming. The huge paws, soft as pillows, are lifted up and set down like thistledown.

You turn and he is there, his large pale eyes fixed on yours with unblinking, savage intensity. A thin thread of saliva trickles down his jaws. He will not attack. An instant

after your eyes meet, he is gone like a ghost in the gray underbrush.

Man is not his prey: with him the lynx seeks no quarrel. What his prey is, you will learn from the frenzied chatter of squirrels where he passes, the whirr of departing grouse, and finally the thin despairing scream, in the depths of the forest, of a snowshoe hare surprised—as thousands of his kind have been before and will be again—by the prowling lynx. V



"Where Do We Stand On Feed Additives?"

DR. W. M. BEESON of Purdue University, internationally-known feed authority, has offered some up-to-date information on feed additives for beef cattle.

Speaking at Washington State University, he said, "Any generalizing on the effect of various feed additives would be misleading, and averages of experimental data often fail to present a true picture. There are marked differences in cattle response to these additives, depending on sex, drylot or pasture feeding, growing or fattening rations, type of grain fed, length of feeding period, disease level, and environment. These observations are made on the basis of present data. In some cases, more critical research is needed."

CHOLINE is a member of the vitamin B complex. Technically, it shouldn't be classified as a feed additive unless it acts as a drug instead of a nutrient. Choline is said to have a stimulating effect on rumen action. If true, it's the first B vitamin to do this. A ruminant can generally synthesize all the B vitamins needed. Some tests have shown gains from feeding choline, but the results haven't been consistent. More study is needed on this.

DYNAFAC is the trade name of a product containing 20 per cent tetra-alkylammonium stearate and 80 per cent bone meal. The former is actually a detergent. Most tests have shown no appreciable gains from feeding this. Some areas (Montana) report gains from feeding it, but there hasn't been enough to be significant.

ETHANOL contains ethyl alcohol. This is supposed to make people eat more, but tests have shown no significant results when it was fed cattle. Some stations have reported that ethanol appears to improve the nutritional value of molasses-urea supplements. But more experiments are needed to clarify the effect of ethyl alcohol on cattle rations.

ENZYMES are digestive substances said to improve the utilization of feedstuffs. A summary of eight tests at Iowa State University shows variable results, but the overall effect was negligible. Apparently the energy and protein content of a ration has a lot to do with its response to enzymes. Most promising enzyme at present is cellulose, which improves rumen performance by breaking down coarse fibers.

HORMONES govern every process in the animal (and human) body. About 75 per cent of the cattle in U.S. feedlots are either implanted or fed hormones, and their use is now spreading to range areas. The female hormone, Stilbestrol, is one of the best growth stimulants science has come up with. Critical tests have shown an implant of 24 to 36 milligrams lasts 5 to 6 months—after that, steers can be re-done and the hormone will give them a second boost. Synovex and Synovex-H give about the same degree of feed efficiency and increased gain as Stilbestrol. Science has only just started to tap this promising field.

TAPAZOLE is a very potent anti-thyroid agent used to treat hyperthyroidism in humans. When fed to animals it inhibits action of the thyroid glands too. Tests have shown increased gains in the early part of the feeding period, and decreased gains in the latter part. The net result has been a reduction in gains from feeding it. The use of tapazole as a feed additive is still in the experimental stage. If it has any value, it will be for short periods.

TRANQUILIZERS at present have their greatest value as therapeutic injections to reduce animal tension during dehorning, clipping, castrating, branding and shipping. As yet there is no tranquilizer that has shown promise as a feed additive to stimulate animal growth. But more promising ones are on the way. Although it is well known that quiet cattle utilize their feed better than disturbed ones, the amounts of tranquilizer used as a feed additive aren't generally high enough to cause a noticeable calming effect.

LIVE RUMEN CULTURES aren't considered very practical at this stage of their development. Research data to date indicates no improved gains, feed efficiency, or digestibility when dried rumen concentrates (4 billion live cells per gram) are added to beef cattle rations. The reproductive capacity of bacteria already in an animal's rumen far exceeds the comparatively small number put in. Better results can be obtained by stimulating the growth of natural rumen bacteria by a proper balance of essential feed nutrients.

OTHER FEED ADDITIVES, such as arsenicals, live cell yeast, dried brewers yeast, fish solubles and B-vitamins, have been tried without much success. The results have been either inconsistent or negative, indicating that a lot more work will have to be done in this field.

"Some day," said Dr. Beeson, "we're going to find out what really makes cattle grow."—C.V.F. V

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Some of Putnam's 2-year-old crossbred steers grazing dikeland with a few straight Shorthorns. Most of them will make brandable carcasses off grass.

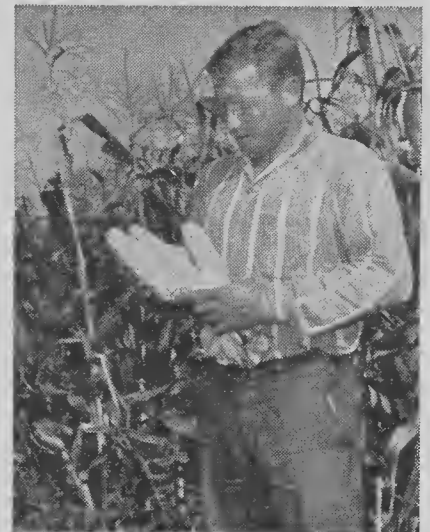
Nova Scotia farmers accept the challenge to produce more

BROTHERS Don and Arthur Porter of Masstown, N.S., face the same dilemma as thousands of farmers across this country. They must expand their operations and boost their income, if they are to continue farming. They have a dairy herd numbering 25 cows. They have a fluid milk contract. But they can't put in more cows, because their market won't take any extra milk.

The Porters have found an alternative to dairy cows in beef, which is one farm commodity for which there is little danger of surpluses ahead. The outlook for beef production is pictured by most farm leaders as extremely bright.

And in Nova Scotia, where the Porters' farm is located, the situation is even better. The area is short of beef today. Most of the beef consumed in the province and, in fact, in the entire Maritimes area, is imported. Yet the province has the land and climate for abundant grass.

The Porters have sized up this situation and are raising steer calves from their Holstein cows. They expect the dozen or so steers a year they will market will make a valuable partner to their milking program.



Dick Haliburton hopes that corn will be the basis for his winter feeding.

They already have evidence that this can be worthwhile. They sold one 2½-year-old Holstein steer last summer to the co-operative abattoir at Halifax. It yielded a 650-lb. carcass and netted a cheque for \$237. It was a steer that hadn't consumed any milk from the time it was a few days old. It was raised on milk replacer, grass and hay, with a little grain. In the 3-month finishing period, it finally ate about half a ton of grain. The Porters figure there can be profit in such a program.

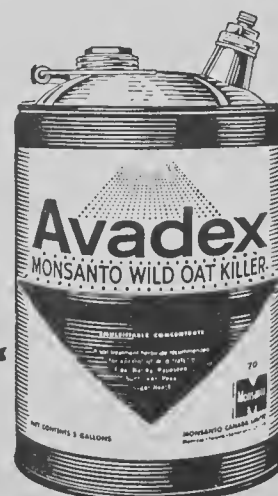
Bert Putnam, who with his son Lorne farms at Masstown too, has advanced even further along the path of beef production. The Putnams have a 40-cow Holstein herd. Lacking a market for more milk, they have turned to beef as an extra enterprise. They breed many of their milk cows to beef bulls now.

That beef blood makes a difference in the steers too. This reporter

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saw 25 such 2-year-olds on good pasture last summer. They were approaching market finish.

"Years when the pasture is as good as this," Putnam explained, "some of the best steers will be fat enough for market when they come off fall pasture. However, the steers usually require about 3 months of grain feeding to bring them to a high enough finish to yield brandable carcasses."

Putnam doesn't skimp his calves. He starts them on a milk replacer and feeds grain as well to get them off to a good start. They are creep-fed grain while on pasture too, and they are given some grain during winter as well.

HERE is the kind of program that extension specialists from the N.S. Department of Agriculture expect to gain in popularity in coming years. "Certainly," they say, "Nova Scotia dairymen hold in their own hands the key to a big expansion in the province's beef business."

There are, of course, many herds of straight beef-type cows in the province—and these seem to be increasing fast too.

"If you have enough land, you can tie in beef cows with another



Lorne Putnam's Holstein herd is the backbone of his new steer business.

farm enterprise and build up a sound program," says farm management specialist Walter Grant of the Department of Agriculture.

One of the biggest such herds is that of Dick Haliburton, and his father, Hon. E. D. Haliburton, provincial Minister of Agriculture.

The Haliburtons have a 150-cow Shorthorn herd to graze their extensive dikeland pastures. They have a big apple orchard, too. Until recently, they have been selling their steers as feeders. Now, Dick is experimenting with corn. Last summer, he grew 20 acres of an extremely early-maturing hybrid—Pride 4. The corn thrived and ripened big ears before he put it in the silo.

It looks to him as though corn is going to be his means of developing a feedlot, and taking those calves the rest of the way from feeder animals to slaughter cattle.

At a time when the Maritimes requires more industry, farm leaders say that beef production represents



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one industry that is waiting to be exploited. Dr. Waldo Walsh, Deputy Minister of Agriculture in Nova Scotia, points out that the province produces about 30,000 beef animals a year, yet the population consumes three times that many. There's a

waiting market for 60,000 more market animals.

"We need the beef. We have the market. We have the know-how," says Dr. Walsh. "There is no better time than right now to begin expanding to that goal."—D.R.B. ✓

More Income from Dehorned Cattle

DEHORNING is simple and cheap. It gives the farmer satisfaction, greater safety, and more income from the sale of dehorned animals and from less animal-inflicted injury.

Dr. S. L. Curtis of the Nova Scotia Agricultural College says calfhood

dehorning has essentially no risk and no setback. Electric dehorners are most widely used, but chemical dehorners, with a little experience, can do just as good a job. With either type, dehorning should be done at 2 weeks to a month, depending on horn growth. ✓

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SC 19-162



[Guide photos] George Hopkins (right) with three of his children and some ewes. The club leader, Jack Stutt of Moosomin, is seen standing in the center background.

Loans Bring Youngsters Into Sheep Farming

Program puts emphasis on family enterprises and keeping records

CANADA'S sheep industry, for long the weak sister of the farm scene, has been given some much-needed help in recent years by the Canadian Woolgrowers' Association. The idea is to encourage young farm people to take an interest in sheep by offering them loans up to \$120, with which to buy 10 ewes. This sum is paid back usually within 2 years.

One of the groups to make good use of this help is the Moosomin 4-H Sheep Club, Sask., with a veteran local farmer, Jack Stutt, as its leader. They started out in 1960 with 12 members, each purchasing 10 ewes with their loans. These were established on the farms under agreements between fathers and their sons and daughters. The ewes, mostly Suffolk, came from the Lees brothers of Arcola.

Last year, membership rose to 19, and the flocks totalled about 300 head. Some have been averaging crops of 1½ lambs per ewe, and a few members have taken out second loans for further purchases. The object is to build up small farm flocks of 40 to 50 ewes, which would fit well into the local farming pattern. There is plenty of rough grazing available, and the emphasis has been chiefly on beef cattle and grain to date.

The district extends about 16 miles to the east of Moosomin, and 30-odd miles to the west and southwest. This means that sheep are being raised under varying conditions, and it should be possible to draw some useful conclusions from the eventual results. Regular meetings, a spring demonstration, a fall achievement day, and encouragement in keeping records are all designed to make the most of the opportunity.

Hugh Cowan, who farms in the Langbank district, is assistant leader of the club, and has a son and daughter, Wilson and Shirley, entered in the scheme. He used to have sheep on his place until coyotes started to take too big a toll. But they have been kept under control with poisoned bait in recent years. The Cowan flock now consists of 27 ewes, after they had sold some of the older ewes. They intend to keep building up numbers as long as the coyotes are kept at bay.

The first set of records produced by Wilson Cowan showed that in a feeding period, from November 20 to March 30, 10 ewes consumed 4,900 lb. of brome-alfalfa hay at a cost of \$24.50. The ewes were purchased for \$12.50 each, and a half-share in a ram cost another \$12.50. Shearing was estimated at \$6, and \$78 was

(Please turn to page 28)



Part of flock started on Cowan farm with help from Canadian Woolgrowers'.

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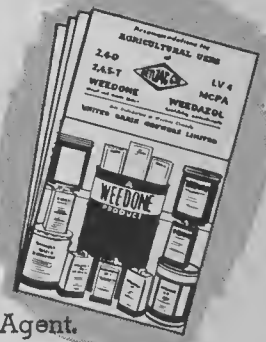
WEEDONE 128—A double strength emulsifiable concentrate 2,4-D ester weed killer containing 128 ounces of acid per gallon. Especially formulated for use with ground or airplane spray equipment. WEEDONE 128 is a high quality selective chemical for controlling weeds in wheat, barley, rye and pastures. Can also be used for weed control on roadsides and non-cropped areas.

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allowed for pasture and roughage. The next step will be to obtain complete figures on sales of lambs and wool.

George Hopkins, another Langbank farmer, has six of his children entered in the ewe-purchase scheme. He wintered 60 ewes on the edge of town in 1960-61 before moving them to his 1 1/2 sections. He also has beef cattle, turkeys, and pigs, and aims to cut down on grain production and seed more land to grass.

George compares the chance his youngsters are being given with his own early days with sheep. As a boy, he used to light the fires at school for 25 cents a day, and he spent the money to buy lambs, which he used to feed with a bottle. George was off the farm for several years, but returned to the land in 1961 and is hard at work building up a mixed enterprise. The family had about 100 ewes and lambs in the fall, and intended to keep about 20 ewe lambs to add to the breeding flock. The sheep are fenced with 5 strands of wire, and pickets are set 4 paces apart. Willows are cut on the farm for fence posts.

All in all, Jack Stutt is pleased with the progress the club is making, with the help of such men as Kenneth Tocher, a farmer at Grove Park, who



Hugh Cowan (left) is assistant club leader; son, daughter are members.

is president. "If we can get these young people interested in sheep production, and teach them how to keep records," says Jack, "it will be well worth the effort."—R.C. V

Fit Feeding to the Weather

WESTERN Canada is a climatic stress area for livestock. Dr. E. A. Hess of Lethbridge Research Station says farm animals experience all kinds of weather conditions during the winter. In southern Alberta, temperatures fluctuate rapidly from cold to warm, and one may prove as harmful as the other.

When the mercury drops, a farm animal must make certain physiological changes to maintain its internal body temperature or it won't survive. Studies at Lethbridge on sheep have shown that moderate cold (0-55°F.) increases heart rate, shivering and appetite, while it decreases respiration rate and daily water consumption. Although body temperatures aren't lowered drastically by this cold, the adjustments made to resist it certainly use energy that normally would be used for production. Continual exposure to severe cold, or even to rapidly changing temperatures, without proper adjustments in the amount of feed or shelter, lowers an animal's disease resistance.

Animals exposed to rapidly changing weather—especially cold to warm—may be less resistant to diseases such as virus pneumonia. At Lethbridge, animals taken from a moderately cold to a warm environment (70°-80°F.) suffer from a form of heat prostration. Apparently body heat from increased metabolism caused by cold isn't dissipated fast enough when the temperature rises abruptly. This results in increased heart rates and panting.

Farm animals require more feed during cold weather to meet increased body metabolism. Feed increases body heat production by: (1) the heat produced within a few hours after eating (Specific Dynamic Action, as researchers call it); (2) the associated changes in metabolic rate with the change in nutritional levels, and (3) by the increase in oxygen consumption, metabolic rate, or heat production, as body weight increases (in either the normal or fat animal).

If possible, feed rations should be reduced on warmer days. Salt added to the ration will increase cold resistance.—C.V.F. V

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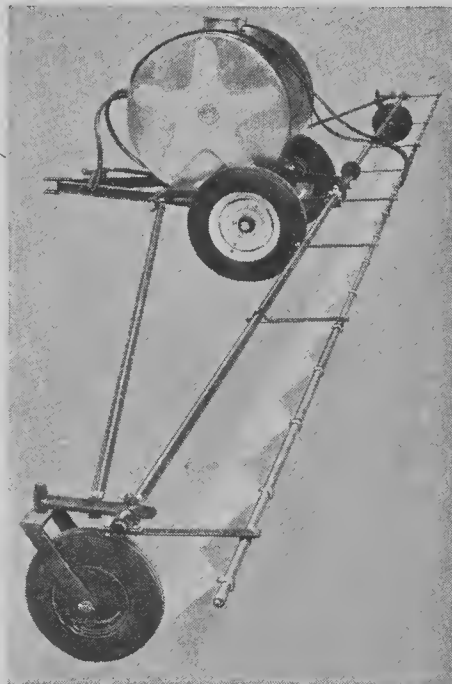
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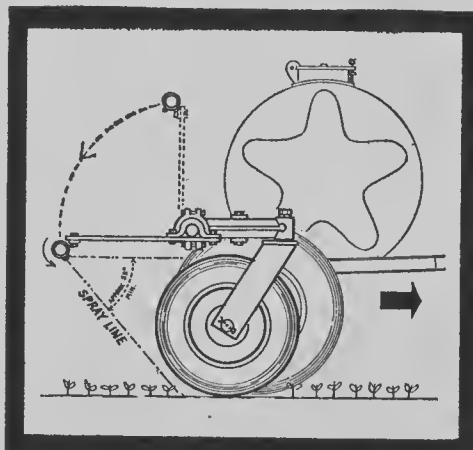
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Steers Got Up In Middle of Night

WOULD it increase production if beef cattle had light for longer periods in winter? Dr. R. Hironaka of the Lethbridge Experimental Farm, Alta., says it wouldn't.

He fed 24 steers from November 8 to February 7 with all the grass hay they could eat, and a mixture of ground wheat and sunflower hulls three times daily. Half of the steers had only natural light, the other 12 had the addition of artificial light from 1:30 a.m. to 8:00 a.m.

After 91 days, there was little difference in daily gain or final weight, with a slight edge in favor of the steers that received no extra light, but too slight to matter.

Although some steers got up when the light came on, they did not feed. Several steers in both groups were chewing their cud at that time. One strange fact was that the steers that did get up when the light was turned on actually ate 1 lb. of hay less per day than those that received no extra light. It may be that the lights disturbed the animals during a period of high rumination activity and reduced the rate of feed passage from the rumen.

All carcasses graded choice, but those that spent nights in darkness had slightly more finish. ✓

Outdoor Farrowing



[Gulde photo]

SWINE specialist Jack Underwood at the Ridgetown Agricultural School likes to farrow sows outdoors, in individual runs in the summer, and raise the litters right to market weight there. The idea, which is also recommended by veterinarian Dr. G. R. Doidge of the school, is to reduce the possibility of pigs becoming diseased, and to permit complete clean-out in the main swine barn.

This Lacombe sow has a 20' by 60' wire-enclosed pasture run, which includes a simple shelter. The run is left vacant every second year.—D.R.B. ✓

Sheep and Water Temperature

IT doesn't matter how cold the sheep's drinking water is, as long as it's not frozen, says Dr. C. B. Bailey of the Lethbridge Research Station, Alta. He found that wethers kept in a room at 10°F. drank about

1¼ lb. of water daily, regardless of its temperature, which was 32°, 50°, 68° and 88°F. at various times. They drank twice as much in a room at 55° as they did in the cold room.

Digestibility of feed was not affected by the water temperature or the room temperature. Body temperature of sheep was only one degree lower in the cold room than in the warmer one.

There's reason to believe, says Dr. Bailey, that further studies will show the same thing applies to cattle wintered outdoors. ✓

More Grade A Hogs in Pole Barn

MARKET hogs may be more economically fed in an open-front pole barn in the milder parts of Canada. R. J. Curtis of the Fredericton Research Station, N.B., says that the open system has produced 50 per cent more grade A's than the closed-in building did.

Four groups of pigs were tested during 14 months to compare conventional and open-front barns—the latter was 39 ft. square and had an

aluminum roof. Half of the test pigs were transferred to the pole barn at 40 to 60 lb., and all remained on test until marketed at 190 to 210 lb.

Those in the pole barn averaged a gain for summer and winter of 0.7 lb. less than those in the piggery, and they needed 30 lb. more feed per 100 lb. of gain, and 3 days longer to reach market weight. But 78 per cent of the pole-barn groups graded A compared with 56 per cent in the piggery. The balance of costs was in favor of the pole-barn groups. ✓

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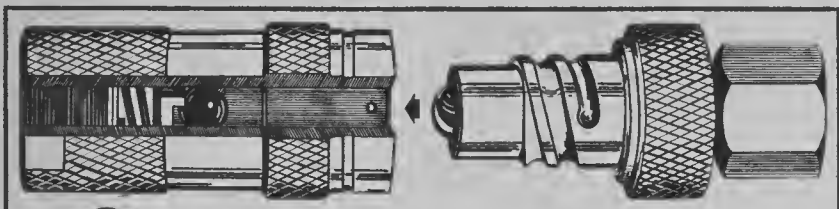
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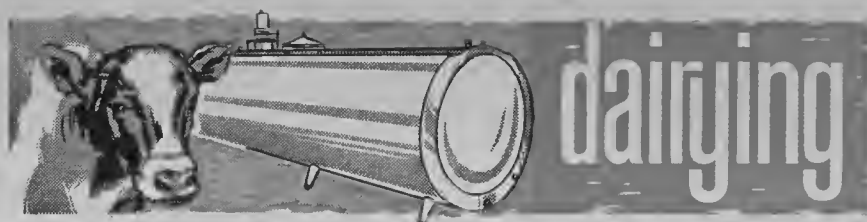
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Glenn cuts hay early and uses a conditioner for high-quality winter feed. [Guide photos

The Right Start In Dairy Farming

Clarence Glenn found the right farm 6 years ago, bought it, and has been going ahead ever since

ONE of the best investments that dairy farmer Clarence Glenn ever made was to buy a set of silo-filling equipment when he was a young man. Not only did he need it at home—his neighbors had a use for that equipment too, and he traveled through the community each fall doing custom work.

He earned extra money this way. But more important, he learned a valuable lesson about farms. He learned that some land and some locations are more suitable than others for certain farm enterprises. He began to see that his own farm didn't meet his long-term needs.

As a dairy farmer, pasture and hay crops were vitally important to Glenn. He wanted heavier land to grow these crops. Half a dozen years ago, he did find a suitable farm near Keene in Peterborough County, Ont. It had 100 acres of clay-loam

land. He bought it, sold his other place, and moved his 20-cow Holstein herd there.

He soon got more land nearby, and had the good fortune to obtain a fluid milk contract as well. Building on that foundation, he has made as much progress, since he moved, as he made in twice the time before.

- He has expanded his herd to over 50 cows.

- He has developed a pasture and forage program that is paying off.

- He has built two tower silos and learned how to grow corn successfully to bolster his winter feeding program.

- He has installed labor-saving equipment in his buildings too — a mechanical gutter cleaner in the stable, for instance, and a bulk milk tank in the milk house.

Now, he says, his farm enterprise is big enough to enable him to quit custom work. He can make full use of his machinery right at home. Glenn keeps two hired men now, so he can devote much of his own time to managing the farm. And he finds he has some time left over to devote to worthwhile community groups like the Federation of Agriculture.



"It takes a big herd to justify bulk tanks and other equipment," he says.

ONE factor in his progress has been his good fortune in getting a fluid milk contract. This enabled him to expand his herd. But the other factor was his land. He admits that his heavier soil is slower in the spring to warm up than his old farm used to be. He has to feed his cattle for a few days longer each spring. But in the summer he can see the difference.

His managed pastures, manured and fertilized, produce lush grazing right through the heat of summer even during dry spells, until aftermath is ready.

(Please turn to page 32)



This standard-weight self-propelled is ideal for most grain growers.

JOHN DEERE heads-in-line windrows withstand rain...are easier to pick up...easier to thresh

The better your windrow the easier it is for your combine to handle it, and the more grain you'll save from each acre. That's why it will pay you in extra bushels and dollars to windrow your crops with a John Deere Self-Propelled or Pull-Type Windrower.

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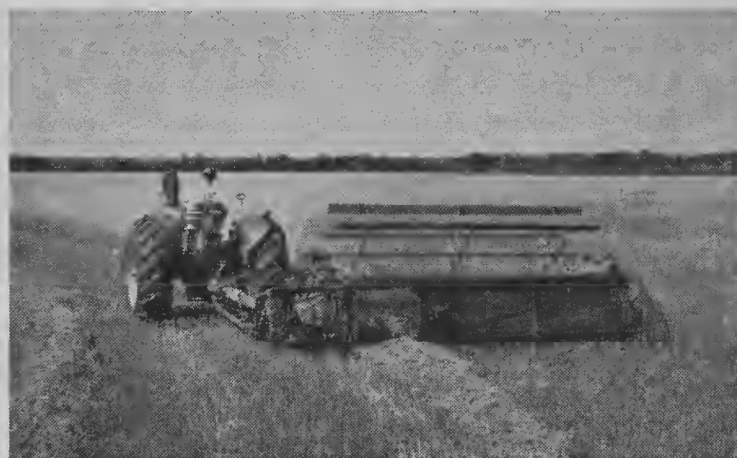
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In fact, looking back, Glenn recalls that his forage program was the first thing he set up on his new farm. He seeded down his pasture fields then, and developed a grass silage and hay program for winter feeding. Then, he swung away from grass silage and began to grow corn because it yields so much more.

His most recent move, was the purchase of a hay conditioner.

"There weren't many dry days during haying season last year," Glenn recalls. "But I make good hay just the same, thanks to the conditioner. That good hay means more milk at less cost."—D.R.B. V

How to Fight The Mastitis Menace

Authorities from key sections of the dairy industry give good advice

MASTITIS, that curse of the dairy industry, was the subject of a useful panel discussion at the annual convention of the Saskatchewan Dairy Association a short while ago. The panel included a dairy farmer, a veterinarian, a manufacturer, and a researcher to provide a variety of views.

Dr. Fred Clark, a Saskatoon vet., opened the discussion by describing two types of the disease: acute mastitis and chronic mastitis. In the former, an affected member becomes hot, hard and tender, the veterinarian explained. Sometimes the animal runs a high fever, and the milk can become watery or bloody.

Acute mastitis is the form most readily detectable.

Chronic mastitis often involves only a small portion of udder tissue. Therefore, the whole gland isn't swollen and the milk appears normal. But the inflammation does change the composition of milk. Sometimes this makes it unacceptable to consumers.

One of the main causes of mastitis is improper milking procedures such as the wrong vacuum setting, unsanitary equipment, teat cups and animals not being cleaned properly, and overcrowding or poor ventilation in their housing. When buying new equipment, a farmer should choose a type which will give least abuse to the cow's udder.

If you have some mastitis in your herd, said Dr. Clark, arrange the cows in such a way in your barn or milking parlor so the mastitis-free animals are milked first. And be sure to choose disease-free stock for herd replacements. As far as treatment of the disease is concerned, intramuscular injections of penicillin are useless. "You'd have to use a very large quantity of the antibiotic for it to be effective, and this would be too costly," he explained. "Then there is always the danger of the penicillin getting into the milk. If you use good management practices, such treatment won't be necessary."

DAIRYMAN Charles Peifer of Nipawin, Sask., told how he kept mastitis under control on his farm. He has cows 7 to 10 years of age that have never had mastitis.

"It's important to have your equipment in good working order," he said, "and it should be handled according to manufacturers' specifications. The pulsator should be regulated so that it pulls steadily at the required rates."

Good breeding stock is another essential. If you use A.I., select semen from mastitis-free animals.

At the Peifer farm, calves receive colostrum from their dams for the first day or two, then they go on milk replacer. They are raised in individual pens to cure them of the sucking habit.

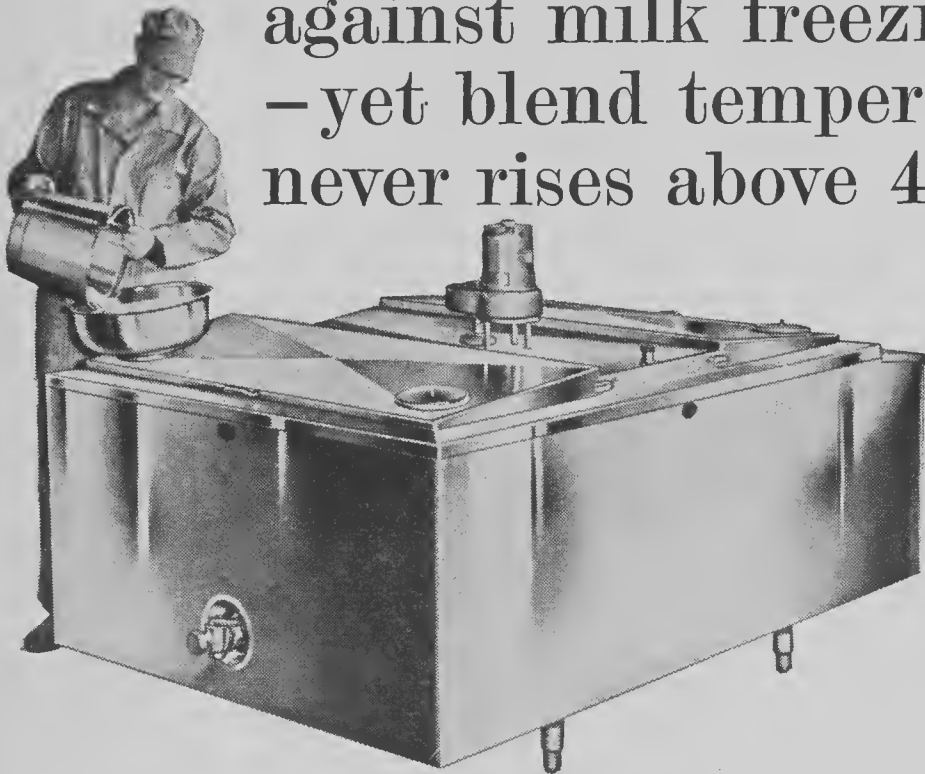
Cows get an injection of an anti-staph (staphylococci) when they calve, then another about 30 days later. This helps to reduce the danger of mastitis. Particular attention is paid to sanitation. When actual milking begins, operators' hands are washed in a disinfectant solution. Cow teats are also dipped, and a separate towel is kept for each animal. Strip cups are used before and after each milking.

Every Wednesday a sample of milk drawn from each quarter of each cow is tested with the California mastitis test solution. Samples showing positive are sent to a veterinarian to find out what type of mastitis is present so he can recommend treatment.

"The best time to fight mastitis is during a cow's dry period," Mr. Peifer stated.

Peifer has three sets of rubber for each milking machine. One set is used for a week, one is soaked in a disinfectant solution for a week and the third (the one to be used next) is stored for a week in a dark place.

Beatty Dari-Kool Bulk Milk Cooler ensures against milk freezing —yet blend temperature never rises above 45°



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Narrow bore liners and a higher vacuum pull will do a faster, more efficient job, he believes.

THE third panel member, Fraser Pemberton, a manufacturer's representative from Calgary, explained that liners shouldn't be used after the "life" has gone out of them, and vacuum hoses should be constantly checked to see that no straw or dirt has gotten in. A farmer should also make sure his pump is large enough to handle the number of units being used.

"Your gauge can't give you this information," he said, "because it only tells you if you have enough vacuum."

A dairyman can reduce mastitis danger by learning to use his equipment properly, Pemberton stated. Washing the cow with a towel and warm water stimulates her so that she starts to let down her milk. This process takes from three-quarters to one and one-half minutes. How you do this is important, otherwise, the machine will start to work on an empty teat, and this could cause trouble. "Most farmers can tell me how their field equipment works," Pemberton said, "but few seem to know how their milking machines work. When inflation collapses, your machine is massaging. It is *not* in the milking position until it is full."

Milk acts as a lubricant in the teats, he explained. As soon as it stops flowing, teat walls rub together and this could cause irritation. That's why it's important to remove teat cups promptly.

DR. C. K. JOHNS, director of the Dairy Tech. Research Institute, Ottawa, told how mastitis can affect the taste of milk. When mastitis germs are present in the udder, more salt leaks through from the animal's blood, giving the milk a salty flavor.

"Some experts can even detect mastitis in a can of milk by simply smelling it," said Dr. Johns.

Mastitis also lowers the solids-not-fat content of milk. Changes in consumer attitudes to butterfat have made the solids-not-fat portion of milk vitally important.

But dairymen won't help their cause by trying to get rid of mastitis by giving large doses of penicillin, he warned. Many people are adversely affected by this antibiotic. Some can be put into a state of shock by it. Penicillin in milk also affects the latter's cheese-making qualities by attacking cheese-making bacteria.

Mastitis is costing the dairy farmer money by adding to production costs, Dr. Johns pointed out, but it could cost him a whole lot more through unfavorable publicity. And dairymen have had more than their share of the latter "with all this heart attack and Strontium-90 propaganda."

"Remember, milk containing mastitis is *diseased* milk," he said. "If certain sections of the press get ahold of this it could have serious repercussions on the whole industry." To illustrate his point, he held up a copy of The Police Gazette where the front cover picture showed a child overshadowed by a bottle of milk containing deadly Strontium-90. —C.V.F. ✓



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Mrs. Reinink examines the difference Gillett's Lye makes: drinking fountains come sparkling clean and germ free.

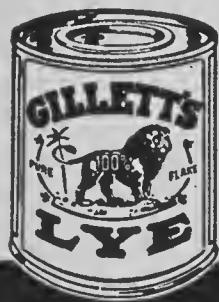
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POULTRY

Can We Save Feed And Produce More Eggs?

by L. KAY, Ontario poultry farmer

There's no easy way, but feeding can be an art that will improve results

IF anyone had a sure-fire formula for the above it would clearly benefit Canada's poultrymen. But experienced feeders would not advocate skimping on feed in order to produce more eggs. One hundred hens have to consume 15 to 17 lb. of feed per day just to maintain body weight. The feed above this amount should go to produce eggs.

However, there is an art in feeding poultry to keep up egg production — the mash and grain method. The proportion of one to the other must be varied according to production and, sometimes, according to the weather. A good feeder knows just how much his birds are consuming each day and when he should increase the proportion of mash to keep up production. Although eggs can be produced most cheaply when the birds are first housed—probably on a 50-50 mixture — this will be changed to a 65-35 proportion by mid-winter in order to maintain the same level of production.

When using the mash and grain system, time can be saved by feeding at one time a quantity that will last a full day, with the exception of a few hours. If the birds are without feed for a short period, the old mash will be cleaned up and they will have a good appetite for the new feeding.

Some poultrymen have changed over from the mash and grain formula to an all-mash ration with which no scratch grain is used. This is somewhat more expensive but simpler to feed, and is well suited to an automatic feeder or to hanging feeders. With this system, mash is kept in front of the flock at all times. We are at present feeding some of



Mash and grain are readily obtained from overhead bins to fill troughs.

our pens on the all-mash ration which contains a lower percentage of protein than the ordinary laying mash. One disagreeable fact we have noticed is that it is more difficult to keep the litter dry in these pens since the droppings have a much higher moisture content.

Most small flock owners give the hens a scattering of grain in the early morning—usually in the litter—to get them to move around and scratch. We all feel better when we see our birds doing the things we believe hens should in order to be healthy and vigorous!

A good percentage of Canada's poultry, however, will never feel straw underfoot, or be able to give one good scratch and peck. They belong to the "caged layer" population, which is becoming popular in the integrated egg factories popping up here and there. These birds have space enough to stand up, turn around, and lay an egg (which rolls away immediately) but that is the full extent of their activities. By comparison, birds in a small farm flock live free and easy lives!



Some use all-mash in hanging feeders available to the birds at all times.

WITH our large number of hens, we look in on them in the early morning but feed all the mash and grain at the one 5 p.m. feeding. Mash is fed first and this is quickly secured from the feed chute and run into the troughs. These are placed in a convenient arrangement so that the man doing the feeding barely lifts the container as he goes from one hopper to the next. The grain is also stored in bulk bins and directed to each large pen by opening a chute. It is fed over the top of the mash and, since this is the "treat" as far as

(Please turn to page 36)

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40 (horsepower of tractor)		650 (hours
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per gallon of gasoline)		operation)

= 2360 gallons

ALWAYS LOOK TO IMPERIAL FOR THE BEST



(Continued from page 34)

the poultry are concerned, we make sure there is some in every feeder so that each may have a share.

If, on the other hand, you feed only part of the ration to the birds in the late afternoon and the balance in the morning, be sure either that they have some feed left in their hoppers for the early hours, or that you go in to feed them in good time. That period just after they jump down from the roosts is a vital time of day. Their resistance and energy are at a low ebb and must be replenished. A flock left regularly without food and water for those early hours would be more likely to suffer a setback in production.

Since high feed consumption goes hand-in-hand with high egg production, should you notice your hens are not consuming the normal amount, it is time to do something to perk up the appetite of the flock in order to avoid a slump in production. We find, at a time like this, it pays to buy one of the ready-mixed booster feeds which contain a combination of antibiotics. These seem expensive but the increased production will be rewarding. Usually a 2-day, full feeding of this special feed will be sufficient to get the hens back on the job.

In mid-winter it may prove worthwhile to vary the birds' ration with a light noontime feeding (about 3 lb. per 100 birds) of a pelleted booster feed containing extra vitamins and minerals. Another method of increasing feed intake is to wet the mash which is already before the hens at mid-day, with skim milk or even warm water.

Finally, here are some reminders which will help save expensive feed and, at the same time, keep up egg production:

- Be sure your feed hoppers have a lip or guard to prevent the birds billing out the mash. Never fill hoppers over half-full.
- Eliminate parasites, which suck the vitality from the birds, thus lowering production.
- Cull out poor birds as they develop. The feed they do consume is wasted.
- Have sufficient feeders and waterers so that all birds will have an opportunity to eat and drink. Overcrowding lowers production and increases mortality. ✓

Where to Save Turkey Costs

FEED appears to be the most important place where savings can be made in turkey production, according to a survey made by Don Conrad, poultry specialist with the Saskatchewan Department of Agriculture. Feed averages 67 per cent of all costs, and ranges from 13 cents to over 18 cents per pound of turkey produced. Such faults as overfilling feeders and lack of shelter from sun and rain should be remedied.

The second major difference in production cost lies in the poults themselves, says Conrad. Poults account for 19 per cent of total

costs, and vary from 3.3 cents a pound to 6.3 cents a pound between producers.

The cost of poults is influenced largely by mortality. If poults are bought at 70 cents and 20 per cent die—as some producers have found—the actual poult cost per bird marketed is 87½ cents. Crowded brooders, poor ventilation, and inattention to little details during early brooding are prime contributors to mortality. It should also be remembered that mortality increases cost of production as birds that die have eaten feed that the surviving birds must pay for.

Depreciation, interest on investment, medicine, and other costs amount to only 13.7 per cent of total costs, according to the survey. They vary from one producer to another

but have little effect on total costs.

Cost of production varies widely between farms, averaging 23¼ cents per lb. for every pound of New York dressed turkey marketable, and ranging from 19½ cents to 27 cents per lb. ✓

High Score for Canadian Broilers

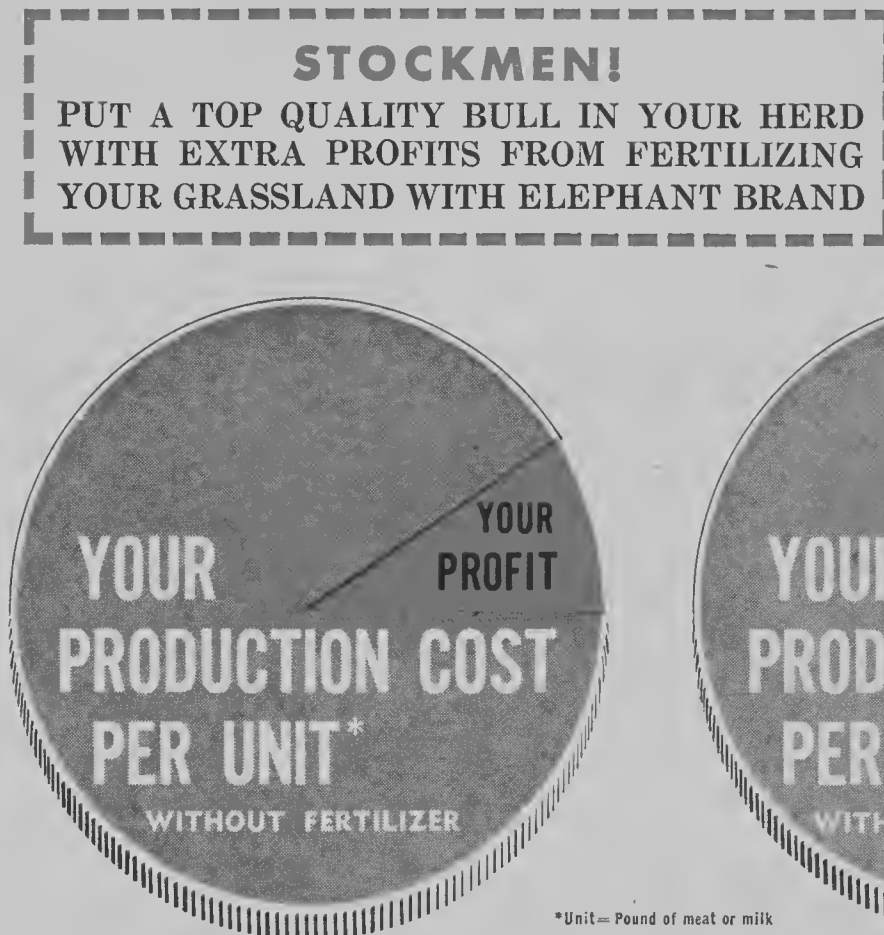
BODY weight at 9 weeks — 4.38 lb.; feed per pound gain in body weight—2.24 lb.; percentage of first figure in relation to the second — 195.5. These are desirable statistics for any broiler chick, and they were reached by a Canadian breeder in the recent central meat test conducted by the Canada Department of Agriculture's poultry division.

The percentage figure of 195.5, known as performance efficiency (PE), was the highest recorded in 5 years of tests.

The records indicate that Canadian broiler breeders have nothing to fear from competition with United States breeders, says M. S. Mitchell, chief of production in the poultry division.

The tests were entered by 8 commercial stocks, all from Ontario, 2 of which were from U.S. breeding that is rated highly south of the border. These U.S. stocks stood 3rd and 6th in the 8 entries when male and female results were combined on the PE basis.

Tests were based on 360 eggs of each entry, from which 120 male and 120 female chicks were used. ✓



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Value of beef per pound20	.20
Profit per pound03	.08
Profit per acre	3.00	16.00

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** Includes the approximate cost of applying 150 lbs. of Nitraprills per acre.

CHOOSE ELEPHANT BRAND AND GET THESE PLUS VALUES:

- A WIDE RANGE OF WATER SOLUBLE, HIGH ANALYSIS FERTILIZERS.
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- STRONG, WEATHER-RESISTANT, NON-SLIP BAGS FOR EASY HANDLING.
- FAST, RELIABLE SERVICE ASSURED BY ADEQUATE DEALER STOCK.
- ADVICE ON FERTILIZER PROGRAMMING FROM A MAN WHO KNOWS FERTILIZER — YOUR ELEPHANT BRAND DEALER.

Spray for Profit

Having the right chemical is not enough to ensure success

AGRICULTURAL chemicals such as weedicide sprays are carefully tested by scientists and approved by capable government authorities before being authorized for sale. Unfortunately, this is not true of equipment used to apply these chemicals. There are sprayers on the market today which are simply not designed to do an efficient job. Knowing the right kind of equipment to buy, and how to use it properly, can mean dollars in your pocket through reduced wastage,

less crop damage and increased yields. Remember, your crop receives no direct growth aid from these chemicals—the benefit must come from reduced weed competition. This is why it is essential for your treatments to be applied correctly.

Choosing a Sprayer. A good rule here is to buy from a firm which has been in the business for a long time and specializes in sprayer equipment. Cheaply-made sprayers, designed to compete solely on the basis of low price, are a very poor investment.



Three popular types of sprayer are the trailer-mounted, tractor-mounted and swather-mounted machines. Being a complete unit that can be hitched or unhitched from the tractor with ease, the trailer type is probably most convenient. Well supported, tractor-mounted units can do a good job too, if the coverage doesn't exceed 25 feet.

Tanks. For best results choose the

aluminum or aluminum alloy tanks, even if they cost more. Steel tanks corrode readily, and even galvanized steel units will corrode in time. Stainless steel tanks are too expensive, except for special purposes. A hinged lid, sealed and properly vented, is better than the "milk can" type of cover.

The tank should not be larger than 80 gallons for tractor-mounted sprayers and 200 gallons for trailer rigs. Make sure your trailer tires are large enough to prevent soil compaction.

Pumps should have enough capacity to maintain the required pressure, plus some return flow for tank agitation. Heavy suspensions will need a return of 10 gal. per minute for every 100 gal. of tank capacity. Use of the pump for filling your tank is also an important factor.

Filters of felt or screening are good. They should be located between pump and boom and at each nozzle outlet, and easily removed for cleaning. Screen mesh size should be smaller than the orifice of your nozzles.

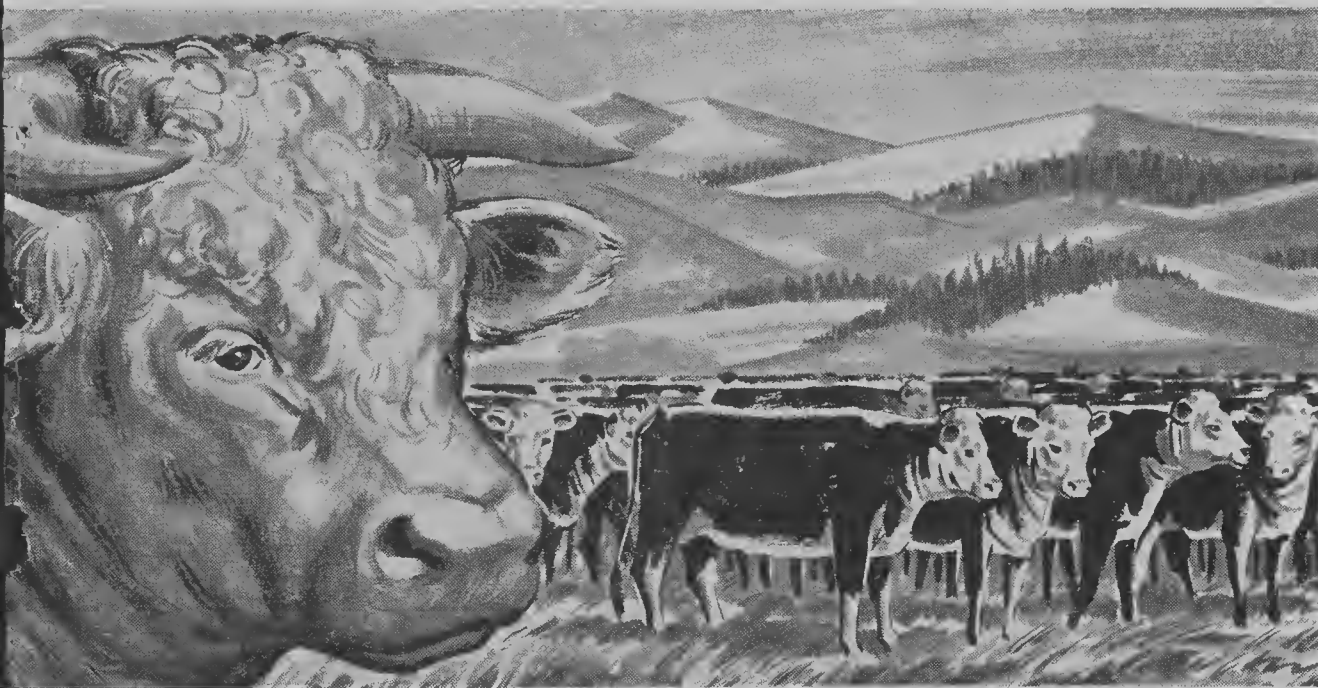
Controls should have a pressure regulator with by-pass agitation, plus control valves for the boom, and a good pressure gauge. If you do any livestock spraying, a hand-gun outlet, complete with pressure gauge, is also useful.

Booms can be aluminum or copper, but aluminum ones need less bracing. You can get suspended booms, stabilized booms and boomless nozzle, or "jet" sprayers. Long, suspended booms without easter wheel support will "whip" in the field (especially a rough field), causing an uneven spray pattern. This actually alters the application rate and can cost you money in crop damage or reduced efficiency. Jet sprays are only recommended for fence lines or roadsides because droplet size (and therefore coverage) varies with distance from the nozzle. If you insist, most manufacturers will supply you with a regular boom sprayer equipped with jet nozzles at each end for "greater coverage." But no manufacturer who really understands sprayers will recommend this. Avoid extravagant claims of boom coverage.

Look for the following features in a boom sprayer:

1. Boom capacity should be enough to avoid a pressure drop between center and ends.
2. There should be removable eaps at the ends for easy cleaning.
3. Radius rods should go right to, or beyond, the easter wheel for maximum support.
4. Boom mountings should allow an easy adjustment for height and nozzle angle.

Nozzles which emit a level, fan-shaped spray are better than cone



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A much bigger tonnage of top quality hay from fertilized grassland will often save buying feed and reduce the amount of concentrates needed in a feeding program. For your high nitrogen fertilizer you can choose from Elephant Brand Nitraprills, Ammonium Sulphate, 27-14-0 and Urea. Let your dealer recommend the right ELEPHANT BRAND product for your needs.

It pays to choose from the Elephant Brand line

11-48-0	16-48-0	16-20-0	23-23-0	27-14-0
10-30-10	13-13-13	14-14-7	AMMONIUM SULPHATE (21-0-0)	
NITRAPRILLS (33.5-0-0)		UREA (45-0-0)	ANHYDROUS AMMONIA (NH ₃) 82-0-0	

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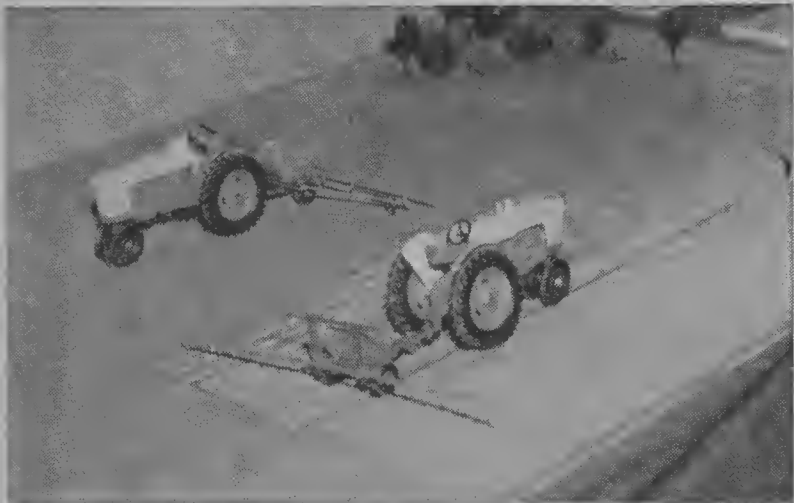
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GET MORE FROM YOUR LAND WITH ELEPHANT BRAND

Models Show the Difference



[Guide photo]

The Line Elevators Farm Service working model of a tractor pulling a supported boom vs. one pulling a free-swinging boom. The unsupported boom dips as the machine hits rough ground and makes an erratic spray pattern. When the sprayer with easier wheels approaches, the "field" flaps over. It is encountering the same rough spots, but in this case the pattern of the spray shows evenly because the boom remains level.

types for crop spraying. They can be of either nylon or metal construction. If metal, the best type is the "clamp-on" nozzle, because it doesn't need tightening.

Most popular nozzles are those which deliver 3 to 5 gal. of solution per acre at a pressure of 30-50 lb. per square inch when your sprayer is traveling at a speed of 4 to 5 miles

per hour. They should be spaced so the spray pattern overlaps slightly. For best results they should be set at an angle of about 45 degrees in the direction of travel and about 16 inches above the ground.

Check Equipment Thoroughly. It is essential that dirt, sludge and scale be removed from all parts before your equipment is used.

- Many agricultural chemicals are abrasive or corrosive. Check your pump by setting it at the recommended pressure and measuring the by-passed liquid. If the volume is less than needed for agitation, your pump should be replaced.

- Check for nozzle wear by catching the discharge from each for one minute in a quart container. Compare this with the capacity of a new nozzle.

- Don't operate with nozzles with a different capacity or fan angle on the same boom.

- Don't fog nozzles by using too high a pressure.

Sprayer Calibration is done by operating the machine over a measured distance at the proper pressure (40 to 50 lb. generally) and a known ground speed, as follows:

Fill your tank with water to a given point, then spray a field at normal pressure and speed for half a mile. Mark the throttle so your speed is always the same. Next, find how much water is needed to refill the tank to its original level. Finally, multiply the gallons used by 16½ and divide this result by the width of the swath (in feet) to get the gallons applied per acre.

Example: 10 gallons used, swath width 33 ft.

$10 \text{ gal.} \times 16\frac{1}{2} = 165$

165

$\frac{165}{33} = 5 \text{ gallons used per acre}$

Chemicals should be mixed thoroughly before spraying. It is also

important to know how much chemical to add for spraying at the recommended rate. To cover 40 acres at 5 gal. per acre will require 200 gal. of solution. If each acre has to have 4 oz. of the pure weedicide (acid), a total of 160 oz. will be needed. In a mixture having an acid equivalent of 128 oz., you'll need

160

$\frac{160}{128} \times 4, \text{ or } 5 \text{ quarts of the chemical.}$

128

Effective chemical weed control requires good equipment, properly adjusted and operated, using the right dosages of the right chemical at the right time.—C.V.F. V

Hay Feeder Usable on Four Sides



[Guide photo]

This hay feeder at the R. C. Frazer and Son feedlot, High River, Alta., is made of poles and snow fencing. Cattle can feed from all four sides.

successful

feeders

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MIRACLE

BRITISH COLUMBIA:



"Joseph Baker, Metchosin Road, B.C., is a leader in egg production and flock management efficiency," says a B.C. Farm Management official.

Figures on his 3,700 bird caged flock are — Average lay over a 12 month period — 70% • Average Feed cost per dozen eggs — 15.4 cents • Pounds of feed to dozen eggs — 4.6 lbs. • Cost of replacement chick and feed to 22 weeks — \$1.35 • Percentage of Grade A eggs over 12 month period — 94.5% • Feed fed exclusively — "Miracle."



Poor Yield from Poor Roughage

POOR quality, late-cut hay is the greatest single factor in reducing rumen activity (and therefore production) in the dairy cow, according to Carnation Farms, Farm Service Dept. When hay stems are old and woody, their nutrients are so covered with indigestible lignin that rumen bacteria find it hard to break this material down. The result is that it remains in the rumen as long as 60 hours instead of the normal 6 to 8 hours, and the cow is forced to reduce her intake of new feed.

Trying to make this hay more palatable by pouring molasses over it doesn't pay either. Bacteria will feed on molasses and give up working on the hay, so your cow's rumen will still be full of undigested fibers. Grinding the hay won't improve the situation very much—nor will it help to increase your animal's intake of concentrates to make up for lost nutrients. Rumen activity can also be depressed by finely ground hay, or too high percentage of concentrates.

There is no substitute for good quality pasture, hay or silage to keep cows producing.—C.V.F. ✓

Use Only Recommended Variety

WATCH out for unlicensed crop varieties, warns A. M. Wilson, Alberta's field crops commissioner. He quotes the example of an unknown barley variety which has been mailed by promoters to farmers and country elevators with testimonial advertising. It is not recommended by the province, and will not benefit the individual farmer or the province.

Mr. Wilson says farmers are asking for trouble if they buy varieties or kinds of crops that have nothing to recommend them other than exaggerated testimonial advertising. They will be paying high prices for an inferior product, and their returns will be less than from recommended varieties.

The argument is reinforced by Dr. F. J. Greaney of the Line Elevators Farm Service. He points out that a farmer who buys an inferior, untested product obtains a variety that will not meet the standards of quality required to maintain Canada's high reputation for top-grade grain. Furthermore, the reason why crop varieties are not licensed is that they lack yielding ability, or disease resistance, or some other vital factor. ✓

Save the Bees

DIELDRIN is deadly to honeybees. This applies particularly to the rates of this insecticide used for controlling beet webworms, according to D. M. McCutcheon, Saskatchewan's provincial apiarist. He suggests that farmers intending to spray should warn beekeepers who have bees in or near the fields.

If given warning, the beekeeper can move his bees to another location, or screen colonies during and after the application of dieldrin. Residues of this chemical, and also endrin, are toxic to bees for 5 days. ✓

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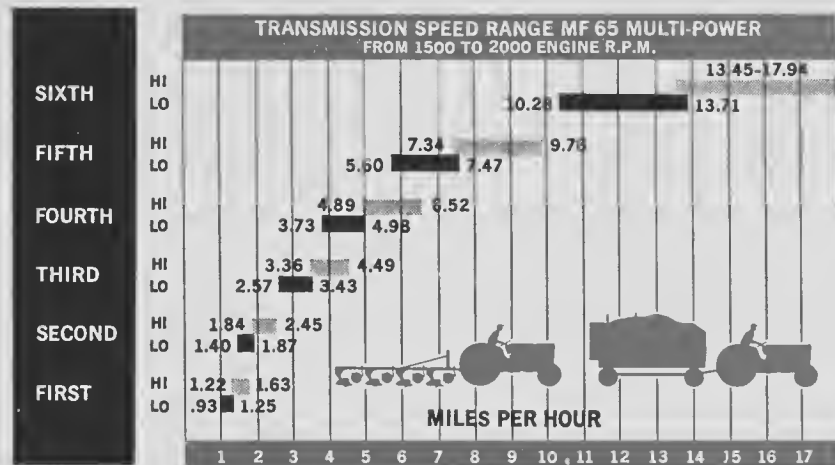
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Multi-Power *doubles* the number of standard Massey-Ferguson forward gear speeds, to twelve, giving you a much wider and more precise choice of working speeds. This means you can



throttle back to the most efficient engine r.p.m., select the best ground speeds for the job, and do more work on less fuel.

Notice the smooth, graduated curve of the Multi-Power gear speeds. There are no duplications, no speed gaps, and no overlapping of speeds. And they're *practical* speeds. On the MF 65, for example, Multi-Power gives you *eight* of its 12 forward speeds in the .9 to 6.5 m.p.h. range where you do most of your field work!

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Only with the Ferguson System could Multi-Power put *you* in such complete mastery of every kind of soil condition and terrain. Multi-Power's 12 forward gear speeds give you far more precise control of the tractor's power. And the exclusive Ferguson System *harnesses* that power with the most precise control of implements ever engineered! Draft is maintained automatically; you adjust the implement's depth, position and speed of response with finger-tip ease.

Flip the Multi-Power switch yourself!

Make a date *now* with your Massey-Ferguson Dealer and test-work the Multi-Power tractor of your choice! Multi-Power is optional at a surprisingly low cost on the gasoline model 3-plow MF 35, the world's best seller . . . on the versatile 3-plow row-cropper, the MF 50 in gas and now in a new diesel model too . . . and on the all-job 4-plow MF 65, diesel or gasoline powered.



FERGUSON 35, 50 and 65

A "MIRACLE" CROP THROUGH GOOD MANAGEMENT

The 1961 crop in the prairie provinces has been called the "miracle crop." It was notable for its size in spite of the hot, dry conditions in most areas.

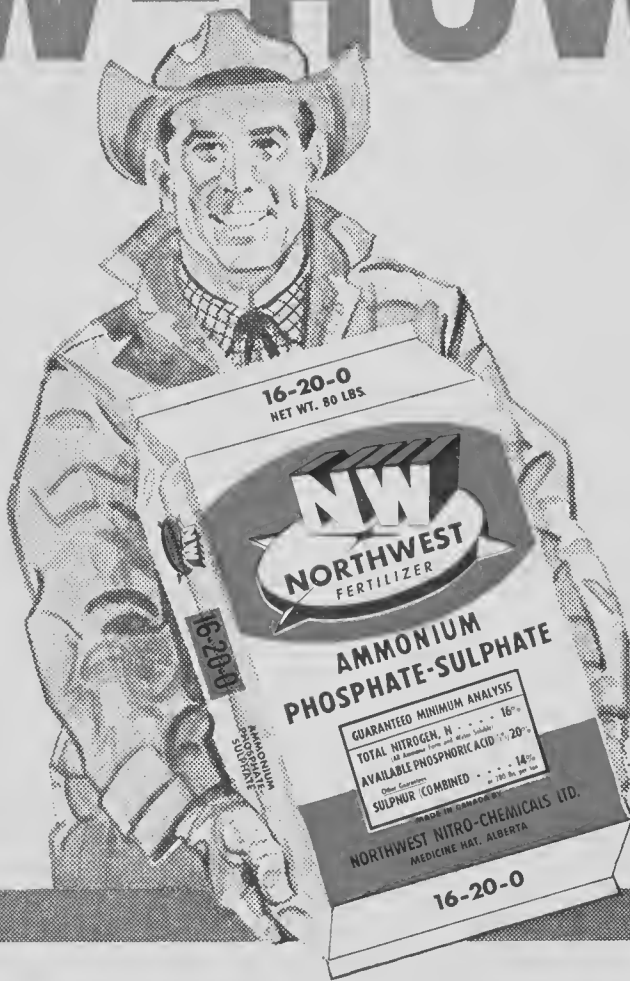
Only thirty years ago similar conditions resulted in disastrous crop failures. In 1961, however, good soil management had the effects of improving

moisture reserves and giving crops improved drought resistance.

It is acknowledged by most authorities that, under conditions of good management, the first requirement for high-productivity farming is good soil fertility. Sales figures for fertilizer in the prairie provinces showed a 123% increase between 1957 and 1961.

Last year, there were reports of crops being obtained with fertilizers, where unfertilized crops in the same district were a total loss. Together with other factors such as seed dressing and weed spraying, fertilizer helped to produce the "crop of good management" in 1961.

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SOILS AND CROPS

Get Ahead of Irrigation Season

SINCE soil moisture reserves are low, those who irrigate will possibly find that they must apply water early and on a continuing basis during the coming growing season. E. H. Hobbs of the Lethbridge Research Station says there are several things that can be done in advance to ensure adequate and uniform water application. Here are his suggestions:

Sprinklers: Have pumps and power units overhauled. Replace or repair worn sprinklers.

It can be useful to check the whole irrigation system from the standpoint of sprinkler size and spacing, hours of operation per set, and the pumping capacity in relation to the crop and the area to be irrigated.

Remember that a sprinkler system has only limited flexibility. Unless there is careful attention to design and operation, the irrigated crop may be patchy and the yields considerably lower than the maximum.

Surface Irrigation: Not much mechanical preparation is possible, but it's a good idea to see to the maintenance of ditching machinery, and also to repair portable dams, siphon tubes, and other equipment ahead of time.

Surface irrigators will also find this a good time to plan for improving water distribution by land leveling, relocation of ditches, or field changes. V

One Case Where Burning Pays

A SERIOUS pest in some alfalfa fields of southern Alberta is the superb plant bug—a small red and black, piercing-sucking insect. It feeds on unopened flower bud clusters, causing them to whiten and die. It can prevent production of sufficient bloom for pollinators.

The superb plant bug lays eggs in new alfalfa stems. The eggs overwinter there and hatch out in spring—usually starting in early June and continuing for about a month. The pest can also exist on Canada thistle.

Tests were made at the Lethbridge Research Station by C. E. Lilly and Dr. G. A. Hobbs, who tried both burning and insecticides to control the pest. Toxaphene at 0.4 to 1 lb. per acre, and DDT at 0.3 to 0.5 lb. per acre, reduced infestations significantly after many eggs had hatched. But early spring burning proved very effective in destroying overwintering eggs. Not only were insects destroyed, but stem and leaf diseases were reduced, and lush vegetation and profuse bloom followed the burning, with a significant increase in seed yield.

The value of burning for control of the superb plant bug is limited strictly to seed fields of alfalfa. Where alfalfa is cut for hay, cutting and removal give sufficient control. V

New Step in Forage Testing

Scientists at O.A.C. are using an artificial rumen to find new ways to grow and harvest quality forage



O.A.C. photos

Ewes with permanent openings into rumen are used in actual feeding trials.

THIS piece of equipment (shown in the smaller picture) doesn't look like a cow, but it has some of her characteristics just the same. It's an artificial rumen. It has been installed by the Department of Field Husbandry at the Ontario Agricultural College, and it is the key to the next step forward in their research program.

Using the rumen, researchers will be able to make rapid tests on the digestibility of feed.

Dr. Bill Tossell, explains, "In the past decade, we have made great progress in forage research. We know how to grow high-yielding crops of grass and hay under a variety of conditions.

"Now we must find out and understand how to harvest these crops, and when to harvest them to get:

- high number of bales per acre,
- high palatability,
- high concentration of nutrients in the feed."

Using the rumen, scientists will be able to make rapid tests of the

digestibility of samples of hay and other forages.

"We know there are differences in the feeding value of various forages

—and these can't always be measured by chemical means," Dr. Tossell points out. "There may even be big differences between varieties of the same species. Trying to get the answers we want by running feeding trials with sheep or cattle would be too expensive, and too slow.

"Look at time-of-cutting of hay. We know that early cutting of forages pays, but we don't know just how early we should cut to obtain high quality forage without sacrificing volume. The rumen should help us to find out."

ULTIMATE use of the information that will result from these trials will be of practical use to livestock men in making up rations, too. For the trials should put a measurement on the feeding value of various hays, taking into account the species or variety of plants in the hay, the earliness that it was clipped, and the weather damage it suffered before being stored. With this information, it would be a simple matter for cattlemen to adjust the supplement part of the ration to balance out the roughage part.

In the preliminary work, now getting underway with the artificial rumen, 8 forage mixtures, each cut at 14 different dates, are being analyzed.

Once screening tests are done on a large number of samples like this,

further testing can be done in real feeding trials.

In fact, sheep are being used in feeding trials at the O.A.C. at the present time. Four different species of plants, with 4 different dates of cutting on each, are being tested. —D.R.B. V

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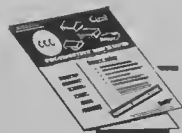
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Prof. Jack Winch places test tube of weighed forage into artificial rumen.

Corn Rows Hold Soil and Moisture on Summerfallow

by L. M. HARTMAN, Camrose, Alta., farmer

SUMMERFALLOWING, which is done to conserve moisture, often creates a problem of soil conservation; especially when there has been little crop the previous year, and hence a minimum of the trash cover which is so desirable. There will be thousands of acres of fallow devoid of such protection.

Under these circumstances, some form of windbreak is the only solution and, as only a small percentage of prairie farms have an adequate

windbreak of trees, a substitute is the answer.

The soil on my farm, here in central Alberta, is a good sandy loam. About half of the land is high and very exposed to wind, and soil drifting has been a problem in the past. As a protective measure I began the practice in 1950 of growing corn in rows, intended as a snow trap on the highest summerfallow.

Following this were several years of ample rainfall, but with the re-

turn of drier conditions I grew corn on fallow again in 1959 and 1961. The results have been so gratifying that I shall never risk leaving the soil unprotected from the sweep of the wind anymore.

PROTECTING the most exposed part of the summerfallow should be the first consideration. Where soil has a small percentage of sand, I have found that a row of corn every 10 to 15 yards or steps, is sufficient.

If it is very sandy and inclined to drift, rows must not be more than 15 to 20 feet apart.

Two seed runs together produce a fairly uniform stand. To arrive at a proper drill adjustment, a test run can be made on a driveway, with a minimum of pressure so that seed is left on the surface. It should average about 12 kernels from each seed run, every 6 feet.

Prairie Blend is a satisfactory variety of corn for the purpose. Soil

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A few bushels of corn give protection to many acres of soil, says Hartman.

should be in as good tilth as possible prior to seeding. It is best to have the land spiked the fall before, or first thing in the spring at a fair depth, and 7 to 8 inches deep early in May.

Corn should be seeded early enough to nearly mature. If not, it may go flat after the first hard freeze.

Date of seeding can vary from May 15th to June 1st, depending on location of farm. Weeds can usually be killed before seeding the corn at a depth of 3 or 4 inches. It can be damaged if harrowed prior to emergence, or after it is up. A narrow shovel is best for working near the corn, until it is a foot high. To avoid covering it up when small, I fasten a spacer between castings of the outer shank of the cultivator, so as to work only a few inches deep, with the rest of the machine at a required depth. The first two operations are best done at a reduced speed, making it easier to control the outfit accurately.

When the corn is large, shovels should not run nearer than 8 inches.

Often there is a snow storm before freeze-up or in the following April or May. Rows of corn will keep snow on the field, otherwise it may be blown off the high land where moisture is needed most.

In 1959, some rows of corn grew 6 feet high and very compact. To distribute this, I cut it as high as possible and ran a swath between the rows late in the fall.

Early next spring I cultivate or

harrow between the rows, then till the corn 4 inches deep, having a straight disc packer behind. After weeds have started or just prior to seeding, I till the corn area crosswise at less than 4 m.p.h. The disc-type packer firms well and punches stalks and leaves in the soil. I seed with a press drill and never harrow afterwards.

THE 1959 corn rows were spaced 20 feet apart. After a good rain, the unprotected fallow would be dried off in a day or so, while land between the corn remained moist for several days. This proves what a high rate of evaporation there is in this part of Canada.

The season of 1960 was fairly dry in my district. Wheat on my unprotected fallow was about a 25-bushel crop, while on the corn land the crop was so heavy I had to travel less than 3 m.p.h. with the self-propelled combine. If that part of the field had been harvested separately, it surely would have yielded 40 bushels per acre. Such a variation in the crop shows that where drying winds are free to sweep across the land, half the moisture received from a rain can evaporate in a short while. By preventing this, evaporation is minimized and moisture penetrates deeper into the subsoil.

A few bushels of corn will protect many acres of soil that otherwise may produce very little crop the next season, or a great amount of the soil may be lost in a cloud of dust. V

Labor Saver For Irrigators



Wheeled lateral lines being used at the S & T Ranch, Medicine Hat, Alta. [Guide photo]

LATERAL lines can be mounted on wheels so the whole line can be moved as a unit. The wheels often have a circumference of 10

feet so lateral moves equal to any multiple of 10 can be made. Some mobile lines are machine powered, others hydraulically.—C.V.F. V

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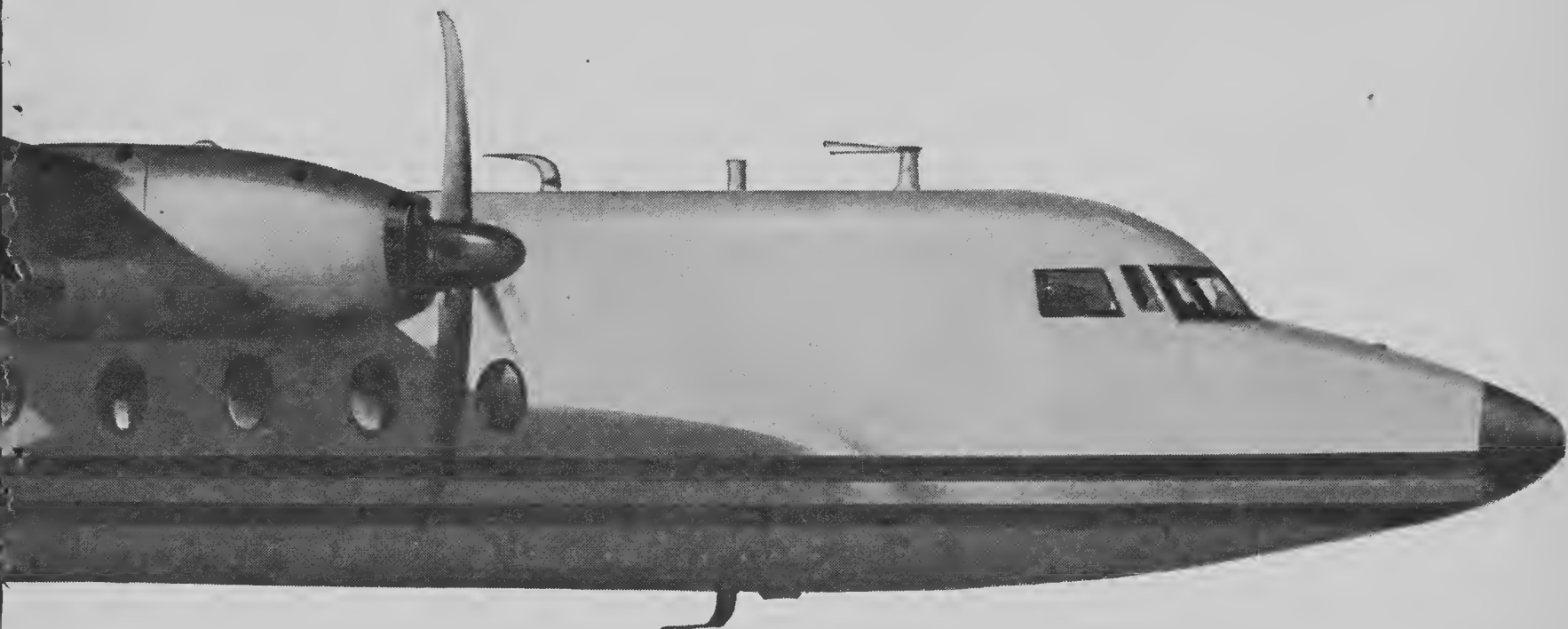
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It's easy to win! You don't have to buy anything to enter. Just tear out the special entry form that's bound into your copy of this magazine. Finish the jingle and fill out

your name and address. Then take it to your favorite service station, garage, or car, truck or implement dealer for a free spark plug check and dealer validation. It's as simple as that!

Contest opens April 16—closes May 27. Winners will be notified about July 31. Trip can be taken any time during the following 12 months. Drive in and ask for your free spark plug check and complete your entry blank *today*!



CHAMPION SPARK PLUG COMPANY OF CANADA LIMITED, WINDSOR, ONTARIO

OR WIN ANY OF 1,242 OTHER VALUABLE PRIZES!



1962 Ford Falcon 2-door sedan with heater and whitewall tires!



1962 Valiant 2-door sedan with heater and whitewall tires!



1962 Rambler convertible with heater and whitewall tires!



1962 Studebaker Lark sedan with heater and whitewall tires!



2 Traveler Runabouts. With trailer and any up-to-40-hp outboard!



10 Admiral Color TV Sets. Ultra-slim table model. True color!



33 DeJur Zoom-lens Movie Cameras. Electric-eye! Zoom lens!



333 Admiral Transistor Radios. Light-weight, 6 transistors!



333 Rival Electric Can Openers. Opens all cans safely.



527 Zebco Rods and Reels. Spin-cast reel with matched 2-piece rod!

He Switched Farm to Forage



Dairyman Adrien Guimont, who has adopted a zero grazing program, also continues to experiment with various types of forage crops, and seeks ways to grow more feed for his 90-cow herd of Jerseys.

ADRIEN GUIMONT was a potato grower in addition to being a dairyman, until recently. In fact, he grew 65 acres of the crop. But then he decided that his divided interest was the cause of his forage program having too many weak spots. He quit potatoes and turned his entire farm, which is located at Grand Falls, N.B., to his dairy enterprise. He now has a 90-cow Jersey herd.

Guimont has 200 acres of land to produce as much of his herd's forage requirements as possible. He grows only grass and hay and other forage crops on his land. And he has developed an interesting forage program.

During the pasture season, he

turned completely to zero grazing. He fenced a 10-acre field to serve as a paddock for the herd, and built fence-row feed bunks where the cows could be fed. He is experimenting with various forage plants and mixtures. Red clover, timothy, brome, and orchard grass form the basis of his program now. But he is also trying millet and fall rye. And he is seeding oats and peas to see how productive they are under his conditions.

To strengthen his winter feeding program, he bought a hay conditioner in 1960, and calls it one of the best investments he has made. It enables him to start haying earlier, which is important when one wants high-quality winter feed. He sup-

plements his hay with pea vine silage, which he can buy from a local canning factory.

Milk from the herd is sold through the local dairy which is owned by Adrien and his brother, in partnership.—D.R.B. V

Hints on Pasture and Hay

THE purpose of any forage program is to produce high-yielding stands of grass or hay, and to harvest them when quality is at its peak. Dr. Stan Young of the Ontario Agricultural College gives the following hints for a more successful forage program.

- Mixtures including timothy, brome, alfalfa, and birdsfoot trefoil provide reasonable tonnages of high-quality forage over a period of several years. Mixtures containing species like bluegrass produce poorly, but give good feed quality. Those containing meadow fescue and red top produce poorly and give low-quality feed.

- Seed mixtures containing grasses alone produce less than mixtures of grasses and legumes, or legumes alone, unless nitrogen fertilizer is used.

- Legumes seeded alone in long-term stands may develop into weedy stands unless herbicides are used.

- Mixtures containing both legumes and grasses usually provide

the most economical high-quality feed.

- A balanced haying program can be set up by seeding some early-maturing mixtures like DuPuits alfalfa, and orchard grass or Saratoga brome, and later-maturing ones like Vernal alfalfa and Lincoln or Canadian brome, and Empire birdsfoot trefoil and Climax timothy.

- Seeding forage crops without a nurse crop can encourage the establishment of a vigorous stand of plants with large healthy root systems.

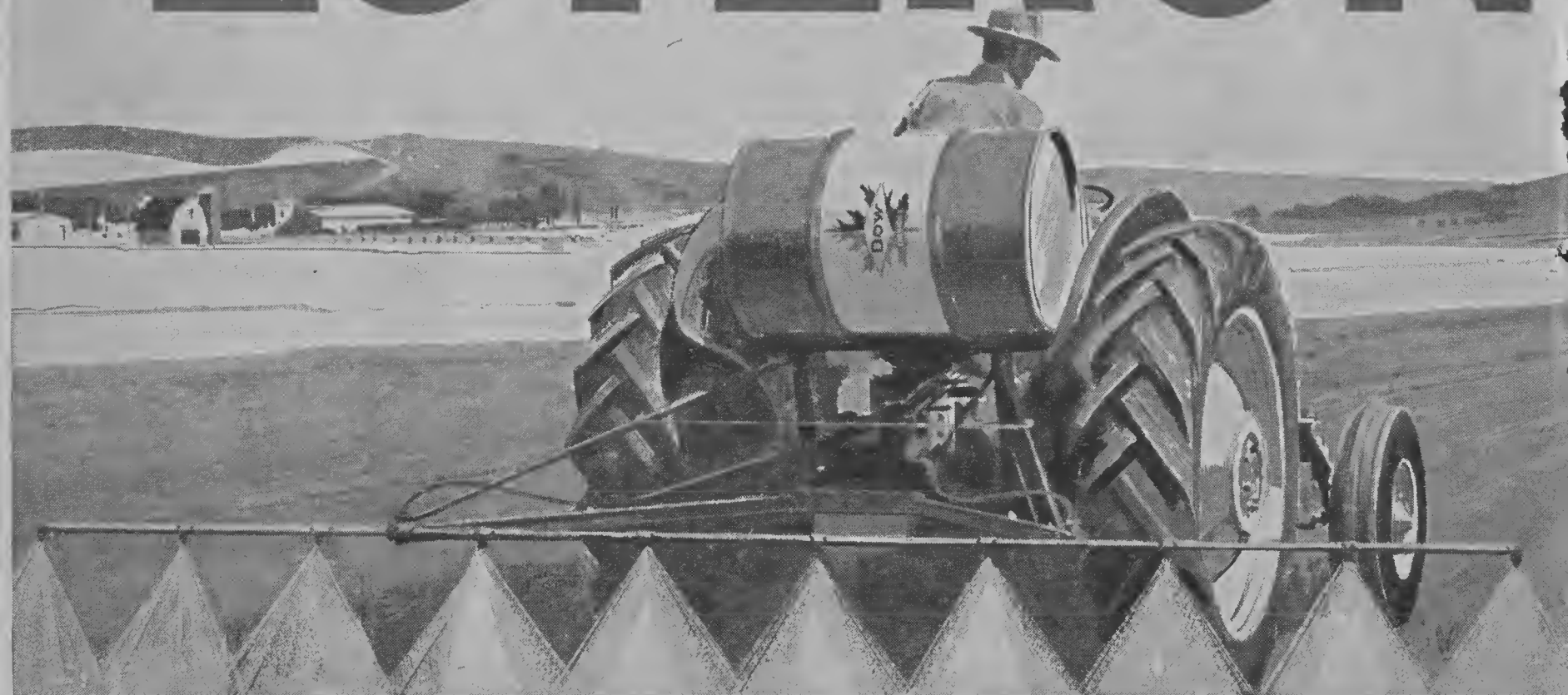
- Fertilizers high in phosphate and potash tend to support growth of legumes like alfalfa, ladino and trefoil, while those which are also high in nitrogen favor grasses like timothy, brome and orchard.

- As forage stands grow older, legumes kill out and higher nitrogen fertilizers are needed to maintain production.

- Time of clipping the forage affects both the amount of dry matter obtained and its feed value. For grasses, maximum production of feed per acre (taking into account both digestibility and the amount that the animal will consume) can be obtained by cutting when the head is just out of the leaf "boot" or sheath. For legumes, a similar stage is at bud or very early flowering.

- In 1961 at O.A.C., a stand of alfalfa cut three times during the season at the bud stage gave higher production than stands cut at any other time.—D.R.B. V

ESTERON



How Customers Save By Picking Own Fruit

*P.E.I. family has found a profitable
way to overcome labor problems*

by DON WOOD

MACHINES have solved the labor problem to a degree, but not for farmers who depend upon strawberries, raspberries, and currants for the major portion of their income. Mechanical harvesting of these crops is still a thing of the future, so labor costs are still high—not on one farm, however.

The Everett Howatts of Tryon, Prince Edward Island, grew about 30 tons of berries last year, but left the picking to their customers. People came by the hundreds, and from as far away as 50 miles, on certain days during the peak of the season. Every customer is a satisfied one because they know exactly what they're getting and pay only for the berries picked.

The Howatts started inviting a few people to harvest their crops for them 12 years ago, and then began expanding. Last year, they had 12 acres of strawberries under cultivation, 9 of which were harvested. Four tons of berries were picked in 1 day. The Howatts stayed with the old reliable variety of Senator Dunlop, except for an acre of Sparkle.

High-quality produce is one of the



Customers know that they can depend upon high quality fruit at Howatts'.

main attractions at the fruit farm, and it was interesting to hear one of the Howatts' neighbors pay them a compliment about their cultural practices. He said, "They have been doing for years what has just been discovered at a research station—that strawberry land should be summerfallowed the year before, and



no manure should be used." The fertilizer, 9-9-7, is applied at the rate of 1 ton to the acre about a month after the plants are set out.

The raspberry acreage has been increased to about 5 acres with a slightly smaller area being planted in currants.

As the customers arrive at the farm, their pails and baskets are weighed in, then each customer is placed on a row and shown where to pick. "We're pretty strict, and there's always one of us right behind them," says Everett Jr. "But by doing this we have no trouble whatsoever, and I'm sure we get a lot cleaner and better job than if we were to hire help to do the picking. Everyone comes with a purpose in mind, and that's to get berries, so there's no fooling around."

Garden freshness encourages a lot of people to pick their own berries and, as one lady said as she dumped another box of raspberries into her pail, "I always like to know where the berries come from that I preserve and make into jelly, and I also like to know who is picking and handling them. This way there's no question about it."



Everett Howatt, Jr., checks on 9-acre strawberry patch after the pickers.

The Howatts never hire any help, so the only costs are for production. Harvesting costs are always a big part of the store price. For most crops at the Howatts, the price works out to about 15 per cent below the going retail level, and "this looks pretty big when you consider food costs today," said one elderly gentleman, as he helped to fill a pail.

According to Everett Howatt Jr., "Dad always says 'people like to

99

CONCENTRATE

Complete weed control for only 9¢ more per acre!



Weeds cutting down your crop yields? Control them with low-cost Esteron* 99 Concentrate—the fast-acting weed killer made by Dow Chemical. Kills even tough species like thistles and wild buckwheat yet costs only 9¢ per acre more than the regular 2,4-D. Esteron 99 Concentrate is a glycol ether ester of 2,4-D. It's extra soluble in both waxes and water. This extra solubility permits Esteron 99 Concentrate to penetrate the waxy layer on weed leaves. Once inside, it dissolves in the plant juices. Spreads throughout the entire plant. Kills everything—tops and roots. This year, use Esteron 99 Concentrate. It's low volatile, mixes readily in your spray tank, and won't clog your nozzles.



DOW FORMULA 8 weed killer. Low cost volatile ester-type (butyl) weed killer contains 128 oz. 2,4-D acid equivalent per gallon. Formula 8 is the most economical product you can use under average conditions.



DOWPON* grass killer. Sprayed on leaves, Dowpon travels throughout a grass plant's growing system, killing everything—from tops to roots. Dowpon controls problem grasses—couch, quack or twitch grass, wild oats and foxtail. Effectively kills cattails and problem grasses in drainage and irrigation ditches, in orchards, around buildings, fences, driveways.



DOW FORMULA 40* (2,4-D 80 oz. amine). Gives safe selective broadleaf weed control in a wide variety of crops at a low cost per acre. Non-volatile, it stays where it's sprayed. Dow Formula 40 is less hazardous for use on or near crops susceptible to 2,4-D ester-type formulations. Mixes easily. Won't foam or clog spray equipment. Can be stored all winter without losing its killing power.

*REGISTERED TRADEMARK

Ask your Dow dealer about Esteron 99 Concentrate or any of the other Dow farm chemicals.

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CHEMICALS
AT WORK**



DOW CHEMICAL OF CANADA, LIMITED • VANCOUVER • CALGARY • WINNIPEG • SARNIA • TORONTO • MONTREAL • SAINT JOHN



Pails and baskets being weighed in.

have some place to go', so we try to make this like home for our customers. We try to encourage berry picking as a family outing, and it's not the least bit uncommon to see a baby carriage in the field. We even had a woman well over 90 pick 6 boxes of raspberries before going up to the house to look around the flower garden."

What plans are the Howatts making for the future? Everett Jr. says, "We've just about reached our limit, because if we increased we'd have to hire help, so I suppose we'll just grow old gracefully. What we like to do best is grow stuff." ✓

Be on Guard Against Potato Blackleg

ONTARIO potato growers should look out for blackleg in 1962. Prof. C. B. Kelly of the Ontario Department of Agriculture says that excessive moisture during the growing season last summer increased the amount of this disease in the fields. It is carried over into storage, so a good proportion of this year's seed will be infected.

Blackleg, a bacterial disease, occurs at the stem-end of the potato, and it is always accompanied by soft rot. An infected tuber is of no value for processing or table use, and especially for seed. Anybody buying seed should keep these points in mind:

- Buy only foundation or certified seed stock.
- Avoid rough handling that will cause bruises or wounds, where decay can enter.
- Store seed in clean, disinfected bins away from other potatoes.
- Check seed when it arrives for any sign of blackleg or rot.
- Discard infected tubers.
- Treat seed with Semesan Bel or other mercuric chloride solution.
- Use whole seed, or disinfect knives used for cutting.
- Disinfect bags or containers used to hold seed with one of the Quaternary ammonium compounds.
- Store seed in well-ventilated place and avoid deep piles.
- Disinfect planting equipment with Semesan Bel, or mercuric

chloride, at 1 part per 1,000 parts of water.

• Clean up culls around the storage daily to prevent seed maggot flies from spreading blackleg and soft rot bacteria. ✓

Wineries Take More B.C. Grapes

by J. REED

ALTHOUGH grapes have been grown in British Columbia in a small commercial way for the last 30 years, it is only recently that fruit farmers have regarded them with more interest than skepticism. In 1961, which was an excellent year for grapes, a total of 3 million lb. was taken to the wineries—almost double that of the previous season.

Dr. D. V. Fisher of the Summerland Experimental Station foresees a possible 2,000 acres of grapes being grown eventually. In the 1961 survey by the B.C. Department of Agriculture there were 585 acres in the province, mostly in the Kelowna and Westbank areas of the Okanagan Valley.

At present, 65 per cent of the crop is processed by the wineries, the remainder sold in baskets for the fresh fruit market. D. C. Stevenson, sales manager for B.C. Tree Fruits Ltd., points out that the expansion in the industry is in wine grapes rather than in fresh fruit.

Growers were offered 10-year contracts by the wineries last season at \$120 per ton. Thus assured of a market for their produce, they are considerably increasing the acreage. Small holdings of a few acres for the part-time farmer to vineyards of a 100 acres are becoming more familiar in the Okanagan, which is primarily orchard land.

The local winery has tripled its capacity in the past few years, in order to keep up with the demand. Some of the larger growers ship to the coast and to the new winery recently completely at Port Moody.

(Please turn to page 54)



W. G. Reed, Westbank, prunes 5-year-old vine. It yielded 25 lb. in 1961.

PERFECT CIRCLE PISTON RINGS ARE BUILT TO TAKE IT

HOTTER THAN A BLOWTORCH

The searing heat that's created inside engine cylinders causes inferior piston rings to lose their strength and resilience, wear out far before their time. That's why Perfect Circle employs special metallurgical skills to produce ring materials with the high heat stability needed for long life.

Extra-thick, solid chrome plating

adds greater protection against scuffing. And, special alloys and heat treating deliver extra-high heat resistance for critical applications.

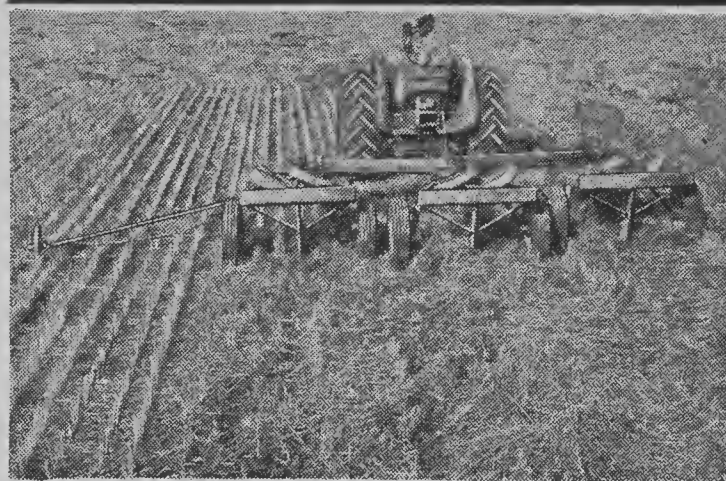
Whatever the job, Perfect Circle rings are built to take it. Insist on Perfect Circles—first choice of leading engine manufacturers and mechanics everywhere.

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LIGHTER DRAFT TILLAGE



NOBLE MODEL "K's"

New, light-draft model available singly, in double, or in triple hitch as shown above. Each unit cuts 6 or 7 ft.

- ✓ **TOPS IN CLEARANCE**
To keep rolling more miles per day
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Lowest shovel replacement cost
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More cover . . . More evenly distributed
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Where even penetration is considered . . . smaller units give more flexibility and more even depth
- ✓ **TOPS FOR PERFORMANCE**
Cuts everything . . . No skips . . . More even seed bed for more uniform germination

We are sincere in making these claims -
MAKE US PROVE THEM!

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NOBLEFORD ALBERTA CANADA

Facts it will pay you to know about

CARBYNE, the farm-proven post-emergence wild oat killer

How you can save time,
work, moisture and money
by controlling wild oats
with Carbyne this year:

Farmers in our part of the world have been plagued for generations by wild oats. This damaging weed that cuts yields and profits is likely to infest nearly any crop—appear in any part of the field. But now, you can stop wild oats *after* they appear with a single spraying of Carbyne, the *post-emergence* wild oat herbicide.

How Carbyne Works:

You spray Carbyne *directly* on the wild oat plants. This stunts the plants and stops growth. Any wild oat plants that may not be killed are so severely stunted that they produce only small seed heads.

Just mix Carbyne with water, according to the instructions on the label, and spray when the majority of the wild oat plants are in the two-leaf stage. The second leaf

may appear four days after emergence, and the third leaf within nine days. This gives you a full six-day period in which you can get the most effective results.

Spray Only Infested Areas

Farm-proven Carbyne takes the guess-work out of wild oat control. Because Carbyne is the one wild oat killer you apply after you see where the weeds actually are, you don't waste time or chemicals where there is no weed problem.

No Extra Tillage

Carbyne is the wild oat killer you *never* have to incorporate into the soil. Rough or ridged fields do *not* have to be smoothed *prior* to application. And there is no extra tillage for soil incorporation *after* application.



MANITOBA WHEAT

"From now on, I'll seed as soon as weather permits, then spray wild oats wherever they appear with Carbyne," says John Yeaman, Rosser, Manitoba. You can see for yourself what a great job Carbyne did on his wheat at right!

On 360,000 acres of crops last year, Carbyne proved it could boost profits for farmers by killing wild oats. Carbyne is recommended for use on Spring Wheat, Durum Wheat, Barley, Sugar Beets, Flax, Mustard, Peas and Rape—but before you decide whether or not Carbyne is right for you, read the facts below:

Every time you till your soil, you bring moist soil to the surface. This vital soil moisture evaporates and is lost! Carbyne application wastes NO valuable soil moisture.

More Profits Per Hour

You don't have to be an expert at arithmetic to figure out this one! The more trips you have to make through your fields, and the more acres you have to cover, the less profit you make per hour. So plan now to save those extra hours—hours you can use more profitably on all those other jobs you have to do.

Just *one trip* through your fields with Carbyne in your sprayer knocks out wild oats. Period.

Lowest-Cost Method

Because Carbyne lets you pinpoint your target and hit it . . . requires only one trip through the field . . . doesn't call for extra tillage . . . you get the most economical wild oat control yet developed. The actual cost for most close-seeded crops is as low as \$2.96 per acre of actual *weed-infested area*, when growing conditions are good!

When you stop and consider all of these facts, Carbyne is the wild oat killer that saves you valuable time, work, moisture and money.

So get ready now to cut production costs and increase crop yields the easy, effective, low-cost way. See your local supplier right away about the Carbyne you're going to need this year!

When To Spray With Carbyne For Effective Wild Oat Control

TOO
EARLY



TOO
LATE



JUST RIGHT

(Wild oat plants are normally in this stage of growth for 6 whole days.)



*Carbyne is a registered trademark of Spencer Chemical Company

Carbyne

REG. T. M.

The
Post-Emergence
Wild Oat
Herbicide

is available from these leading farm chemical specialists

UNITED GRAIN GROWERS LIMITED

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See Your Nearest Carbyne Supplier for FREE FACTS

Free folder tells how Carbyne gives you proven protection against wild oats for higher yields and profits! Get all the facts before you decide!

"For Victory Over Wild Oats,
Spray Them With CARBYNE
When They Are In
The 2-Leaf Stage!"



A product of



SPENCER CHEMICAL COMPANY
Kansas City, Missouri, U.S.A.

IF
YOU
ARE

...start building
a fine future
now!

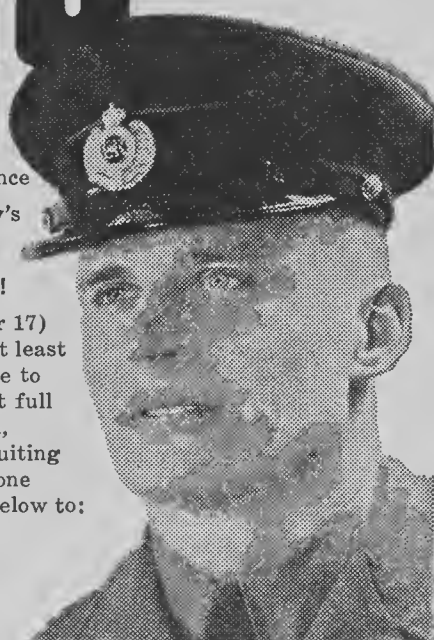


Join the select
group of young men
whose careers commence
this year with the Army's
Soldier Apprentice Plan.

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You must be 16 (but under 17)
the day you enrol - with at least
Grade 8 education and able to
meet Army standards. Get full
details, without obligation,
from the local Army Recruiting
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book, or mail the coupon below to:

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Army Headquarters
Ottawa, Ontario



CONTINUE YOUR
EDUCATION during the
two-year course.

PREPARE FOR A MILITARY
CAREER through excellent
leadership training.

EARN WHILE YOU LEARN
with full pay from 17.

LEARN A TRADE under
expert instructors.

Please send me, without obligation, details
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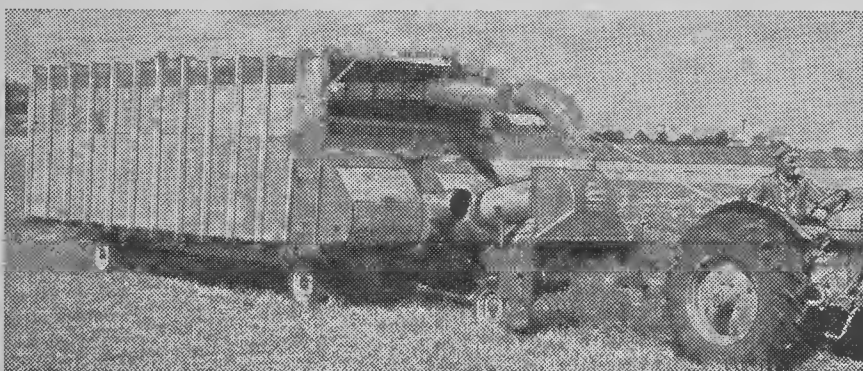
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Age _____ Phone No. _____

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"make hay while the sun shines" - silage if it doesn't!

One man, one machine, one
tractor, no forking. Easy to
operate and maintain, fully
field proved. No twine to
buy, no extra help to pay
and board.

ALBERTA
Nance Company Limited
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McKee Harvesting Systems
Elm Creek

QUEBEC AND MARITIMES
McKee Harvesters (Eastern)
Box 173, Chateauguay, Que.

Forget your Weather Worries with a McKEE ONE-MAN HARVESTER

With your McKee you can store away 30 tons of hay in
a day if the weather's fine . . . blow the green stuff
into the silo if it's not. With the one machine you can
handle hay and grass or corn silage; direct cut grass
and haul it to the cows; pick up and haul swathed
grain; pick up combined straw and blow it into your
deepest mow.

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.....McKee HarvesterTime Payment Plans
.....McKee Chisel PlowsMcKee Snow Blowers
.....McKee Insta-HitchMcKee Water Bowls

NAME _____

ADDRESS _____

McKEE BROS. LIMITED

ELMIRA
ONTARIO

(Continued from page 52)

This company expects the Okanagan
to supply their eventual annual re-
quirements of 600 tons.

Grape vines are grown approxi-
mately 500 to the acre with an aver-
age crop of 5 tons. It is 3 or 4 years
before a crop should be taken off
and results can be shown from the
labors of setting posts, stringing
wire, pruning, cultivating, and fer-
tilizing.

Unlike other fruits grown in the
Valley, grapes are subject to few
pests, so the farmer does not have
the expense of extensive spraying.

The majority of grapes grown for
wine-making have been White Dia-
monds and Campbell Early. The
stock was imported from Geneva,
New York. However, experiments at
Summerland with more than 50
varieties have aroused interest in
new hybrid varieties. These have
European fruit characteristics and

American vine characteristics, com-
bining heavy yield, high sugar con-
tent, and low acid content, so desir-
able for the making of good wines,
with early maturity and hardiness.
Among the most promising are Him-
rod seedless, Buffalo, and Seibel
9110, with a vine yield at 3 years
of 36 lb.

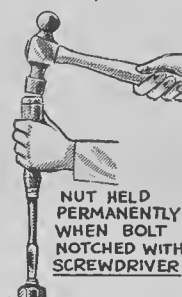
Harvesting is a pleasant task and
often a family affair as the sweet,
fragrant bunches are simple to pick
and the small lugs easy to handle.
It takes place late in September or
October, when most other fruit pick-
ing has been completed, and it is a
comparatively unhurried operation.

Fruit farmers have their share of
weather hazards and marketing diffi-
culties, so that it is not surprising to
find many of them taking a second
look at grape growing. It is well
suited to local conditions, there is a
sure price for what they can produce,
and the future is promising. V



Permanent Nut

Nuts that are subject to vibration
or weather can be fastened just once
and then forgot-
ten until the ma-
chinery or equip-
ment wears out.
A reliable and
quick way to do
this is to make a
notch in the end
of the bolt with a
screwdriver and
hammer. The
notch should be against the thread
and behind the nut, once the nut is
properly set. This will never work
loose. If the nut should have to be
changed or loosened, it will readily
recut the thread, and then a new
notch can be made.—H.M., Ont. V

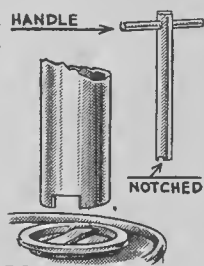


Lock Lubrication

When your car key won't turn the
door or trunk lock without undue
effort, take an ordinary lead pencil
and scrape some lead into the lock.
This eases it up at once, and works
well with other locks.—H.J., Pa. V

Barrel Cap Remover

Caps on gasoline and oil barrels
are often difficult to loosen. You'll
find it handy with **HANDLE** →
the more stub-
born caps to have
this tool, which
consists of a piece
of pipe, small
enough to fit in-
side the caps. A
hole is drilled in
one end, and a
rod inserted to
act as a handle
for greater leverage. The other end
of the pipe is notched to fit over the
ridge of a barrel cap. — R.A.M.,
Alta. V

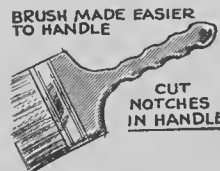


Tire Inflator

When I have a flat tire on a tractor
or implement, and it's far from the
garage, I take the spare tire from
my truck and have it inflated at the
garage to 80 lb. pressure. By con-
necting this tire to the tractor tire,
the flat can be inflated wherever it
happens to be, and it's a lot easier
than doing it with a tire pump. —
Z.M.W., Man. V

Grip for Painting

Especially when you are wielding
a large, smooth-
handled paint
brush to apply
slippery materials,
such as oils,
grease, etc., the
smooth handle is
difficult to hold onto. Overcome this
by forming four finger-grooves in the
handle with a half-round file, or with
a grinding stone.—H.J., Pa. V



Copper Leak

When a leak develops in a copper
water pipe and a new fitting has to
be soldered in, it sometimes happens
that no matter how tight the control
valve is shut, water continues to
drip in the pipe, making soldering
impossible. Push bread into the pipe
and this will soak up the water long
enough to get the soldering done.—
H.J., Pa. V

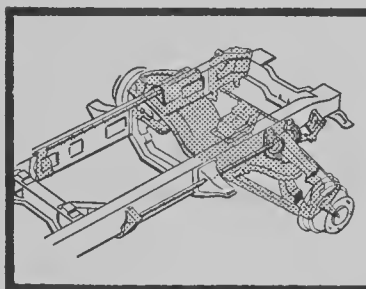
Holding Muffler

When installing a new muffler, or
exhaust pipe, insert two metal screws
in the joints. This keeps the assembly
from shaking loose, no matter how
rough the roads are.—B.C., Calif. V

Pay for all the truck you need...

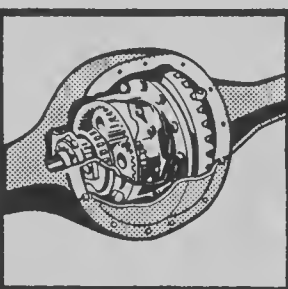


and no more—with ***GMC 960 Series!***



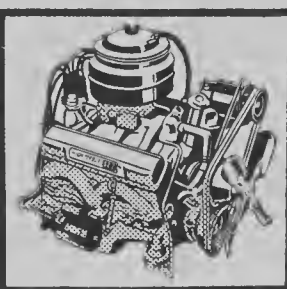
RIDE!

GMC's Independent Front Suspension, coupled with performance-proven GMC Vari-Rate rear springing, gives a smoother, easier ride to protect the truck, the load, and the driver.



LOAD!

Single, or 2-speed vacuum or electric shift, 15,000 or 17,000 lbs. capacity rear axles are now available. Result: larger cargoes can be carried for bigger payload profits.



POWER!

A brand new 327-V8 engine with 185 hp. is available in the 960 series as an optional extra—providing extra power for the most demanding load and road conditions.

GMC's wide range of options gives you the opportunity to buy the truck that's exactly suited to your needs.

In GMC's 960 series, for example, you'll find trucks that are properly balanced—the result of a total truck concept which relates power, transmissions, suspensions and axles one to another, to do the best possible job at your required GVW rating. The GMC 960 gives you a new range of GVW ratings to choose from—19,500, and optional 21,000, 22,000 or 23,000 lbs.—with a choice of Conventional or Tilt Cab models in a wide range of wheelbases. Now you can tailor a truck to suit your needs—without buying equipment that may be unnecessary for the task you have to do. Add GMC's famous built-in quality and good looks, and you're in business with the truck that's best suited to your requirements—with no unnecessary extras. Talk over your particular requirements with your GMC Truck dealer—he's the man who can best advise you on your equipment.

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GMC

8 SOCKET-WRENCHES IN 1

NEW! A wonderful general purpose socket-wrench for all industries, for garages, the farm, repair shops, factories, engineers or fitters. The wrench is designed to reach bolt heads and nuts in hard-to-get-at positions. The heads are offset to clear obstructions and to protect the hands.

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3/4, and 7/8.



Full Length
10 1/2
Inches

of the operator. It is made of strong, tough steel. Approved by the Society of Automotive Engineers (S.A.E.). This wrench is absolutely fully guaranteed. Therefore, in case of faulty material or workmanship, free replacement will be sent when the faulty wrench is returned.

\$4.95

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WORKSHOP

Tighter Pliers

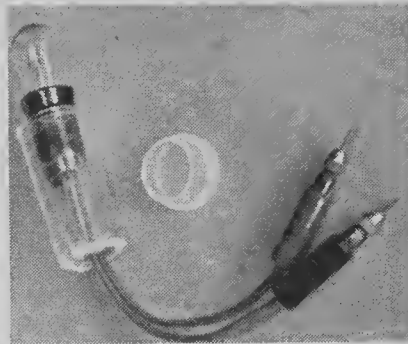
If you have trouble with pliers slipping, tighten the nut that locks the handles together, and then burr over the threads on the bolt with a center punch. This will keep it from working loose. The nut should be tightened so that the jaws move easily but grip the work firmly. — B.C., Calif. ✓

Bolts in Concrete

When you have bolts to set in a concrete floor, wall, or ceiling, make up a workable mixture of cement (without sand) and enough plain seltzer water to fill the holes. Bolts set in this mixture will stay put in-

definitely. Swab the holes with the seltzer before putting the mixture in.—H.J., Pa. ✓

Circuit Tester



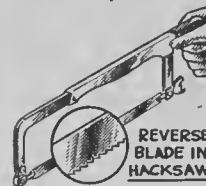
Set a 230-volt bulb inside a plastic pill bottle, and it will make a good light for testing electric circuits, with the addition of two leads terminating in insulated probes.—H.J.M.

Chicken Catcher

When you want to catch chickens, use a canvas slat and a piece of heavy wire. Drill a small hole at one end of the slat, push the wire through the hole, and bend it to form a hook which will catch a chicken by the leg. This does not hurt the bird. — R.S., Sask. ✓

Sawing Thin Material

When you have thin-walled tubing or thin sheet metal to cut with a hacksaw, either reverse the blade in the frame or hold the saw by the end, not by the handle. The idea is to have the teeth of the blade pointing toward you and away from the work. Then it won't skid, chatter, or bind in the cut.—H.J., Pa. ✓



Fitting a Gasket

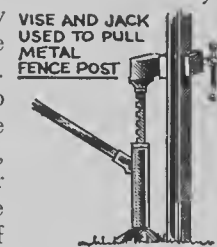
To make a gasket fit better, cover the surface of the machine with a thin coat of oil, hold the gasket material against the coated surfaces and tap it with a soft-nosed hammer. This will leave a perfect pattern on the gasket material and makes it easy to cut to exactly the right size. — B.C., Calif. ✓

Save Headlight

When one filament was burned out in a double-filament headlight, I saved it and used it to replace the single-filament headlight. I had to grind a notch in the headlight holder so that it would fit.—A.L., Alta. ✓

Post Remover

Metal fence posts come out easily with an ordinary workshop vise and a car jack. All you need to do is clamp the vise to the post, set the jack under it, and then use the leverage of the jack against it.—H.J., Pa. ✓



Keep Spade Clean

Smear the spade periodically with old engine oil. This will prevent mud from sticking to it.—R.Q.P., Man. ✓

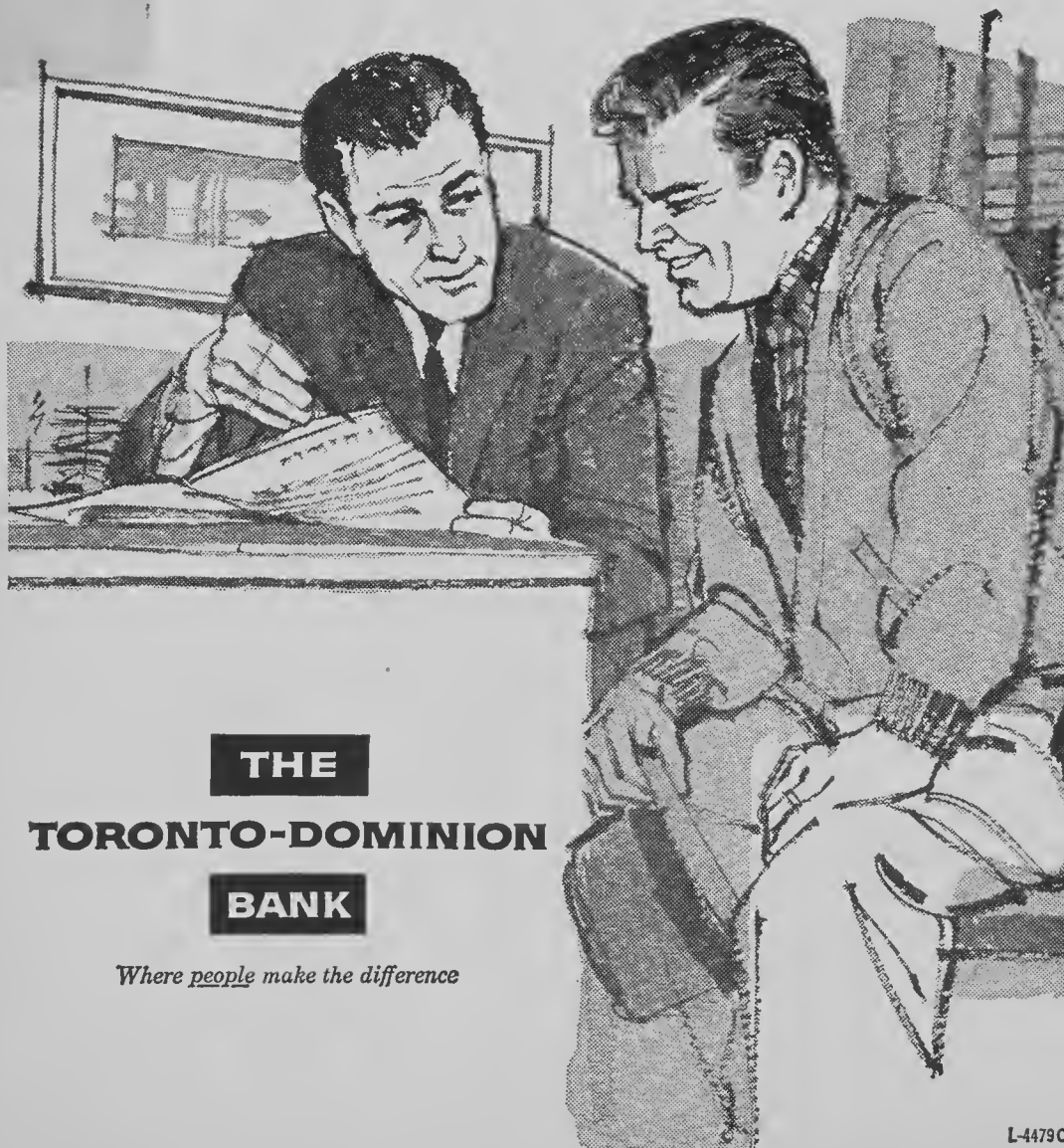
Tightening Nuts

To tighten 4-sided nuts, such as you find on wagon beds and the like, set the nuts square with the wagon, then a quick glance will spot the loose ones.—B.C., Calif. ✓

When you need a FARM IMPROVEMENT LOAN we try to be a little more helpful!

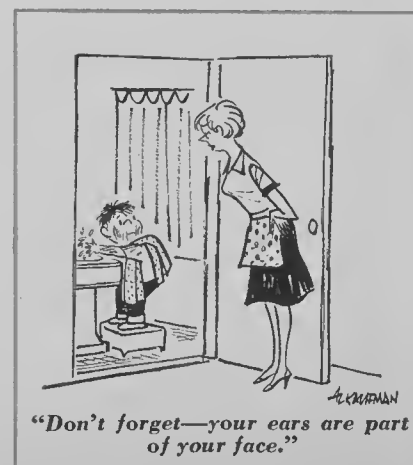
Progressive farmers recognize the need for farm improvement each year. This may or may not mean a loan—but when it does, The Bank can meet the need with a Farm Improvement Loan on excellent terms. And there are many additional services besides . . . all the more valuable because your Toronto-Dominion Bank manager *knows* your real and pressing problems.

He knows the way in which you operate. He is aware of your marketing difficulties, and the ups and downs of the national economy that affect your plans and hopes. He can offer suggestions, help you plan your year—and in many useful ways prove to you that *people* at The Bank really do make the important difference in farm banking. Why not see him now?



**THE
TORONTO-DOMINION
BANK**

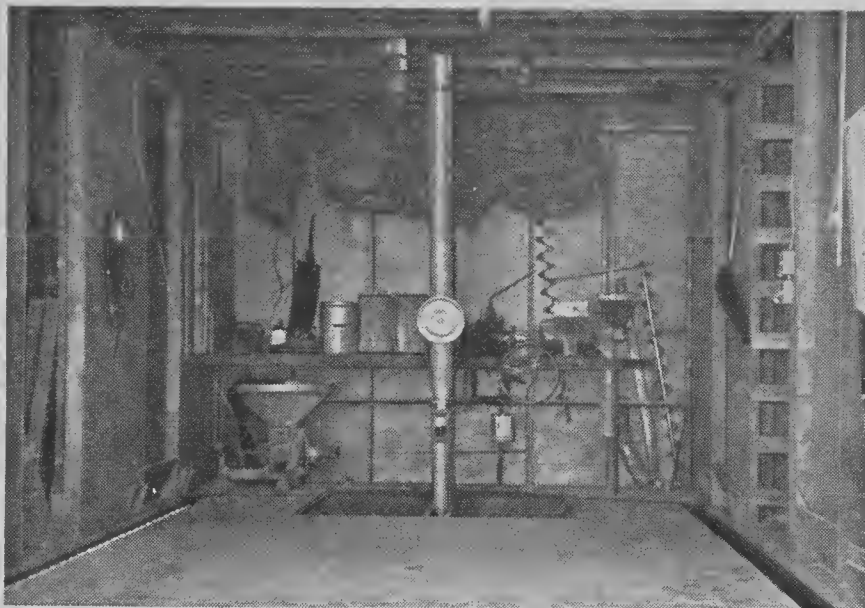
Where people make the difference



"Don't forget—your ears are part of your face."

L-4479C

FARM BUILDINGS



Main floor with pit and auger at far end, conveyor augers set into floor.

Mechanized Grain Storage

WHEN Harry Janick decided to store his grain in small bins, he built himself an elevator and mechanized it completely to eliminate shoveling. The idea of small bins is to be able to store small quantities of a particular grain without tying up a whole granary.

A truck drives into the elevator and dumps grain into a pit at the far end of the main floor. From there, the grain can be augered to any of the 8 bins on the second floor and, if necessary, dumped from above into one of the 6 bins on the main floor. Alternatively, it can be augered straight to a 150-bushel hopper beside the seed cleaner on the second floor.

For taking out the grain, there is a system of conveyor augers set in the floor along three sides of the central area. Grain is run from the lower bins, or down chutes from the upper bins, directly into the conveyors, which carry it to the pit. Then it can be augered up to the hopper for dumping into a truck or for putting through the cleaner.

Dividers in the upper bins are centered on the lower bins to enable the grain to flow from one bin to the

one below it without any shoveling. When bins are being filled, two telescoping spouts direct the grain from the auger to the required bin. A separate auger moves grain from the seed cleaner to any bin. Cleaned grain drops into a cavity in the floor, where the auger picks it up, or, by opening a slide, it can run down into a truck. There is a portable auger also which can be put into any bin, or into the opening of a chute from an upper bin.

Yet another auger, a small, hand-operated one, goes down into the pit below the main auger to pick up any grain that may be left.

The power for Janick's grain handling system is provided through two transmissions from a truck and a car, plus the level drive from a combine. One transmission gives three speeds for the main auger, plus reverse for cleaning out. The second transmission operates the conveyor augers at four speeds, either together or separately, through a moveable shaft that engages or releases drive belts. The conveyor augers were home-made, except for the flights that Harry had to buy.

Harry Janick, who farms at Roland, Man., seeds 300 to 350 acres each year to wheat, flax and peas. Wheat and flax are stored in his elevator, but peas are difficult to handle with an auger, so they go into metal granaries. The elevator holds a total of 5,500 bushels in 14 bins.—R.C. V

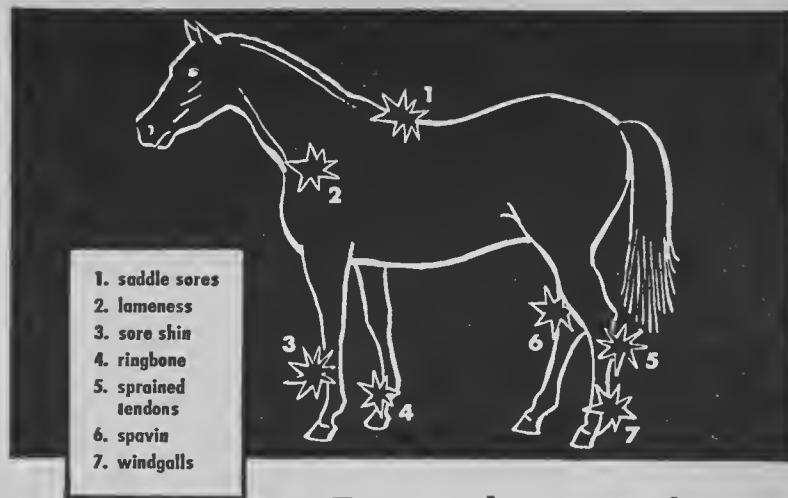
Rat Race

A BRITISH farmer has found a smart way to deal with rats. B. Southgate of Fakenham, England, noticed that a rat rarely runs straight for an opening into a building. It runs to the nearest point and then follows the line of the wall until it finds a way in. Mr. Southgate laid a pipe against a wall, leading directly into a trap. The rat runs into the pipe, finds a way into the building, and then drops into a pit trap. V



Harry Janick's automated, 2-storey elevator has 14 small storage bins.

Trouble Spots?



1. saddle sores
2. lameness
3. sore shin
4. ringbone
5. sprained tendons
6. spavin
7. windgalls

Treat them with
ABSORBINE
at the first sign!

For over 65 years Absorbine has proved effective in the treatment of spavin, windgalls, ringbone, wrenches, puffiness, sores and bruises. At the slightest sign, use Absorbine promptly! Absorbine is antiseptic, doesn't blister skin or remove hair. Directions with every bottle. Only \$2.50 at all druggists.

ABSORBINE

W. F. Young Inc., Montreal 19, P.Q.



"EASY STEERING FOR HEAVY LOADS" } says
CY CRAWFORD
Mgr., Watkins Products Research Farms

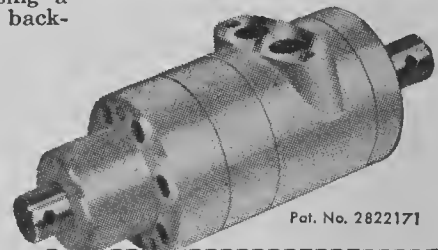
"Watkins Products Research Farms are like most other big livestock farms when it comes to 'housekeeping'. There's plenty of 'material handling', and horsing a big loader, day in and day out, is a back-breaker."

"A year ago, we added Char-Lynn Power Steering to our loader equipped tractors to give the boys a helping hand . . . and it's really been a great improvement. Takes the hard work out of these chores, saves us time and cuts accident hazards."

"Chances are, there's a Char-Lynn Power steering kit for your tractor. It's well worth checking into."

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299 Danforth Road, Scarborough, Ont.

GRAIN BELT FARM EQUIPMENT LTD.

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NORTHWEST FARM EQUIPMENT LTD.

Cor. 7th Ave. and 6th St. E., Calgary, Alta.

ALLIED FARM EQUIPMENT LTD.

980 Pacific Ave., Winnipeg 3, Man.



Mr. Morris Francis, Farmer at R.R. 2, WALKERTON, ONT., says: "Our LINCOLN Welder more than paid for itself in the first year. Since then we've come to rely on it so much that we would hate to be without it."

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"FARM
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These plans with details, pictures, bill of materials and suggestions explain how to make 44 different pieces of equipment for farming, handling livestock, trailers and shop tools. 99 pages. 8½" x 11" size.

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- ☐ Please send me the name of my nearest dealer.
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Other Uses!

Amazing HANDYMAN jacks up trucks, tractors, wagons, or buildings; unexcelled as auto bumper jack; pulls posts, pipes, roots, small stumps; stretches woven or barbed wire fence; splices wire; makes hoist, clamp, spreader, etc. LIFTS, PULLS, PUSHES with 3-TON CAPACITY. Hundreds of uses around farm, home, garage. Simple and easy to use. One man can do work of ten. Sturdily constructed of railroad steel and malleable iron. 4 ft. long—27 lbs. Will last years.

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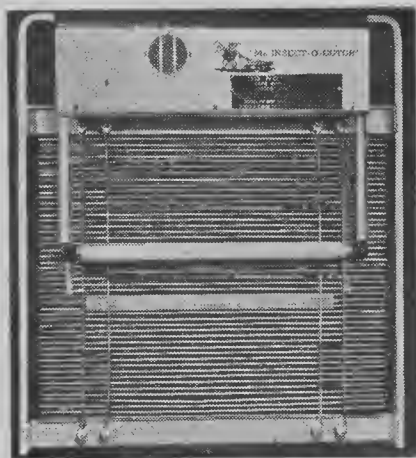
30th Summer—June 18 to September 8
Courses in: Music (including four week Symphony-Band Workshop), Painting, Theatre Arts, Handicrafts, Ballet, Figure Skating, Writing, Photography, Modern Languages.

For Calendar, write: Director, Banff School of Fine Arts, Banff, Alberta.

WHAT'S NEW

Jet Pump

This new two-stage, horizontal pump is self-priming for shallow well service to 25 ft., and is also efficient if converted to deep wells. It is a jet pump, with multi-stage design to provide higher water pressure, and at low cost, for installations in the home and on the farm. (Jacuzzi Bros, Inc.) (370) ✓



Bulk Unloader

Fitting on the tail-gate of a dump truck, the "Piggy Back" handles bulk materials from the finest fertilizers to the coarsest pelleted feeds at speeds up to 1,000 lb. per minute. It has a heavy-duty auger, 14-ft. tube, clean-out gate for unloading grain without an auger, and safety stand to protect the auger as the dump-bed tilts. (Tyler Manufacturing Co.) (372) ✓



Depth Finder

Using the principle of water pressure, this instrument is said to give readings to depths of 150 ft. directly off a calibrated scale. The depth readings are obtained quickly, and it is designed for obtaining measurements in connection with reservoirs, wells, ponds, and irrigation depths. (Vexilar Engineering) (373) ✓

For further information about any item mentioned in "What's New," write to WHAT'S NEW Department, The Country Guide, 1760 Ellice Ave., Winnipeg 21, Man., giving the key number shown at the end of each item, as—(17).

I WAS JUST FIGURING..

by
Cy Watkins



MIRACLE FLY KILLER

Ever since DDT, you hear stories of new insecticides that sound like the answer to a farmer's prayer. I've heard tell of things you can "spray on the barn in the Spring, and you won't have a fly all year."

Sounds great, doesn't it? But let me give you the honest-John truth . . . "there just ain't no sech animul" . . . not that's safe to use.

The truth of the matter is that if you want good fly control, no one insecticide will do the job. It takes a fly control program that includes good sanitation practices and several different types of insecticides.

Take dairy fly control, for instance. Here is a recommended fly control program that will really pay by preventing losses due to flies.

1. **Management.** Get rid of breeding spots. Spread manure often. Use screens wherever possible.
2. **Residual Insecticides.** Use residual insecticide to keep the fly population down. They'll swamp you if you don't. The recommended residual is Watkins Triple Duty Concentrate, which can be mixed with water or oil and sprayed on walls, manure piles, etc. It kills for weeks and weeks.
3. **Pasture Protection.** Watkins Dairy Fly Spray is approved and safe for use directly on dairy cows. It's a combination fly killer and repellent that protects cows while they're grazing . . . lets 'em spend their time mowing grass instead of fighting flies.
4. **Space Sprays.** To top off your program, you will need Watkins Pyrethrum Fly Spray for use in the barn before milking time. It's powerful, safe . . . and economical.

A complete fly control program like this doesn't cost . . . it pays. It pays by preventing losses in production that pest flies can cause . . . production losses that sometimes run as high as 20% . . . one gallon in five.

Your Watkins Dealer has the recommended insecticides, sprayers and insect control programs for most insect problems you'll ever run into. Let him help you do the job on your farm.

Win a Vacation in Mexico

You could be one of 4 lucky couples to win a free vacation at the famous Pierre Marques Hotel in Acapulco, Mexico . . . flown to this vacation wonderland by Canadian Pacific Airlines, first class, on a luxury jet-prop BRITANNIA Empress. Next time your Watkins Dealer calls, be sure to enter the GO MEXICO Contest.

WATKINS PRODUCTS, INC.

Montreal - Winnipeg - Vancouver

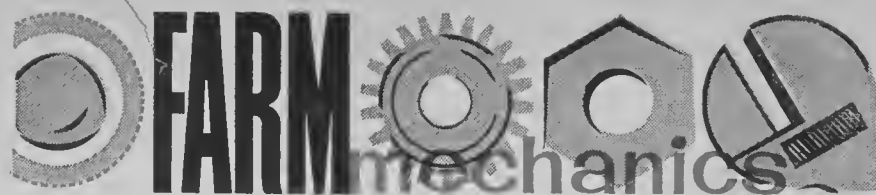
THE COUNTRY GUIDE

How to Build A Hydraulic Dump Cart

by HARRY PEDERSEN, Farmer, Three Hills, Alta.

ONE of the handiest implements on my farm is a hydraulic dump cart, which I built myself, with the use of a welder, steel from the nearest junk pile, and a little of my own imagination. The cart utilizes the hydraulic power which is already on my tractor, and the material to build it cost me less than \$15.

Almost every farm has a junk pile, which includes a heap of discarded machinery. Here you can probably find all the steel you need for a dump cart of your own. The frames of old rod weeders yield a lot of good angle-iron, and the front wheels and axle of an old truck are just what you need for cart wheels. With the aid of a few bolts and your welder,



you can start putting the steel framework of the cart together.

The wheels and axle I used were from an old 2-ton Ford with cross springs in front. The wishbone or radius rod can be left on as part of the chassis, but the wheels should be braced and welded so that they cannot pivot on the kingpins. The tongue can be made of light railroad iron or "I" beam and is welded under the axle. It extends forward under the radius rod, and is welded to it, too.

I made the frame on which the box sills are placed out of angle-iron. A single piece is sufficient across the front, but the sides are each made of two angle-irons welded together into boxings for strength. This is 2" x 2½" iron, ¼" thick, and makes boxings 2" x 2½". Next, I drilled holes horizontally through these boxings, near the rear end, for the box hinge pins.

This frame is welded to the axle and radius rod, wherever they make contact, when the boxings are put in place. With this bit of welding done, the solid bed of the cart is complete.

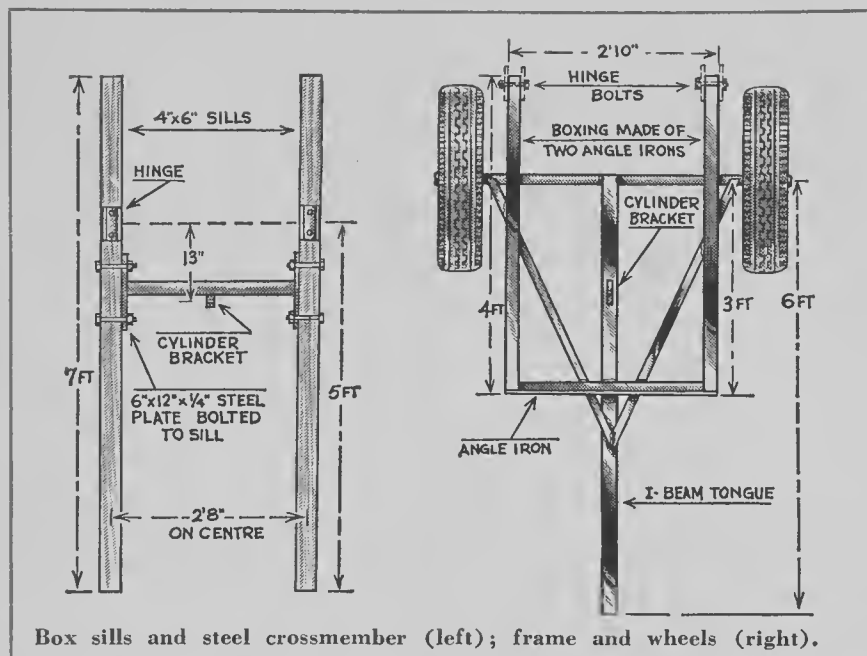
I made my box sills out of 4" x 6" timbers, 7' long. The hinges are three pieces of strap iron, ¼" thick. One piece is about 4" long and 2" wide



The author's cart dumps easily, using the hydraulic power from the tractor.

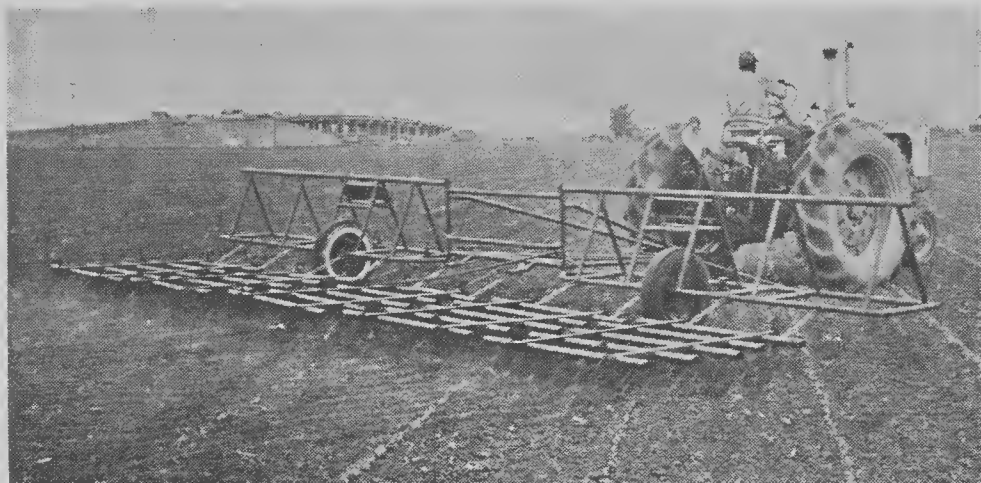
and bolts to the bottom of the sill. The other two pieces are 3" long. They are welded in place on the first piece to extend downward on each side of the steel boxing. Half-inch pins or larger should be used for hinge pins.

The steel crossmember on which the hydraulic cylinder pushes is also a 2" x 2½" boxing made from two angle irons. This crossmember is welded at each end to a steel plate 6" x 12" x ¼", which in turn is bolted to the inside of the box sill, so that the top of the crossmember is flush with the top of the sill. In



Box sills and steel crossmember (left); frame and wheels (right).

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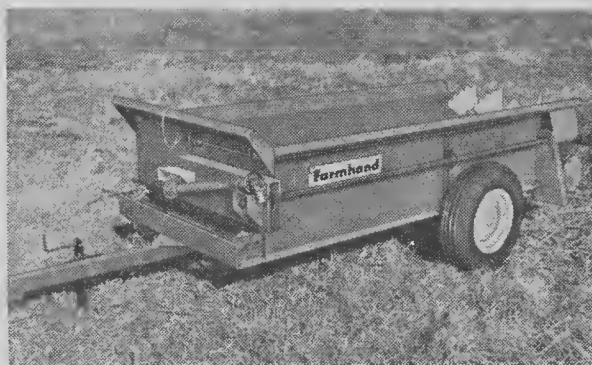


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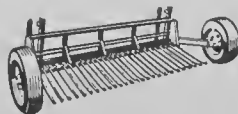
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THE NEW FARMHAND F-43

Manure Spreader (120 bu.) gives you rugged, low-cost dependability. Single pole tongue permits sharp turns. Draw-bar pull direct on axle prevents undue spreader box stress. Special torsion bar adds to spreader rigidity and floor support. 5/8-inch treated plywood floor. Low, wide profile makes easy loading with barn cleaner or tractor loader. Liquid-sealed front endgate. Tough, simple worm gear drives frost-proof apron. Full length 1½-inch steel widespread shaft. Husky, heat-treated "rooster-comb" paddles shred completely, spread evenly.



FARMHAND ROCK PICKER sweeps 8 ft. path. When full, raise and dump into a truck or pile.



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Removable sides adapt the cart simply if it's needed to haul grain or feed.

the center of the forward side of the crossmember, I welded a bracket which fits the clevis on my hydraulic cylinder. The other end of the cylinder is pinned to a similar bracket on top of the tongue, about a foot ahead of the axle. The distance of this bracket from the axle will vary according to the length of cylinder stroke. Figures here are for an 8-inch stroke.

Fit the front of the tongue with a clevis type hitch. A ball and socket trailer hitch could also be used. Then, finish the box by countersinking 2" x 4" cross pieces into the 4" x 6" sills. This keeps the overall height of the cart down as low as possible. The floor of the box is nailed to these cross pieces. The box is only 8" in depth, as wide as the wheels will permit, and it is 7' in length.

I've found that the low height of the cart makes it handy for loading and dumping manure and rocks. Later, however, I built higher, removable sides for the cart. I put these sides on whenever I want to haul grain in it. They are particularly useful in the winter when the snow around my grain bins is too deep to get the truck to them. I can haul the grain out in the cart whenever that happens.

So for hauling manure, rocks, soil or grain, my little dump cart has earned the cost of its manufacture many times over. And it's still working fine. Sometimes I wish it was just a little bigger. V

Where to Place the Barn

ARE you planning to build a barn? Engineers at Macdonald College, Que., have some interesting ideas on how to choose a site for it.

Drainage and exposure. There should be a southern exposure for an exercise yard if the barn is to house livestock. And there should be a slope to carry off drainage water, or there will be serious troubles in the exercise yard. No building should be placed where drainage water cannot be directed away from it.

Relation to other buildings. The most important factor here is the home. Don't locate the barn on the line of the prevailing wind past the house—if the barn is downwind there's danger of chimney sparks igniting straw in the barnyard; if the barn is upwind there can be odor nuisances at the house. Often, it is possible to place secondary buildings close to the barn to form an exercise enclosure.

Other relationships. Access to the farm lane is important, as the lane often starts in the barnyard, and curves and turns in it can be a nuisance. Paddocks and exercise yards can be changed to suit the position of the barn, but the fewer

changes that have to be made the better.

Water supply. If there's a good well on the farm, the ease of moving this water to the barn by pipe should be considered in choosing a site for the barn. V

Cow Stalls Are Adjusted



[Guide photo

Adjustable-length cow stalls are a feature of the dairy barn at Collins Bay Penitentiary Farm, Ont. Eighty cows are tied in this barn. Stall divider curbs have grooved metal fittings. So that a plank to be adjusted forward or back, and deep-litter comfort is made to order for each cow. V

NEW easier to use LATEX HOUSE PAINT



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... Zenith flows on and dries evenly leaving no run, sag or brush marks—paint when you want even in damp weather. Zenith—the best Latex House Paint you can buy.

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Write or phone now to your nearest Scotiabank for Bank-by-Mail forms and full information on all the deposit, loan and other services that may interest you. You'll find The Bank of Nova Scotia has more to offer.

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A NETWORK OF OFFICES ACROSS CANADA AND ABROAD



Tongues of flame leapt skyward from the reeds and loud boomings interrupted the whirr of beating wings.

by ARTHUR G. STOREY

ALL week the flock's noisy honking disturbed the serenity of the quiet northern lake. Honker was puzzled. Silence had typified his life from the previous spring when he pecked his way from the confines of his egg until now. Throughout the long summer in which he had grown to adulthood, his had been the only family of Canada geese on the pine-scented lake. Then, with the first frost of autumn other families began to arrive.

Of course Honker had known for some time that his was not the only family of geese. The old gander who sired his brood had seen to that. How well Honker remembered the ecstasy of that first flight beyond the pines surrounding his lake. There had been other flights too. Flights on which the small flock had landed in open fields — for practice — Honker understood. But nightfall always found the brood back on the lake it knew as home. Honker believed this would always be so.

One morning when the young gander was five months old strangers began to arrive at his lake. Their numbers increased each day, and as the flock grew in size, a strange restlessness began to settle over it. Honker did not understand. Perhaps this impatience was born of the sudden changes in the color of the forest. Maybe it was the chill that had crept mysteriously into the gentle breezes that stirred the waters of the lake. Perhaps it was a peculiarity of another lake carried here by these foreigners. In any case, one morning it was there. Honker felt it, and it grew in him until he longed

to stretch forth his young wings and rise into the autumn sky and fly endlessly southward.

A fortnight after the first strangers arrived, the young gander's impatience became so strong that he beat his great wings and gave vent to it in piercing cries that echoed back from the changing forest. Immediately other throats took up the echoes and hurled them back in a crescendo that filled the misty dawn.

As suddenly as it had begun the clamor died out, its rolling echoes receding farther and farther back into the forested hills. The Canadas listened. Other voices had caught up their impatient cries. Looking up, Honker saw a giant V of geese flung across the sunlit sky high above the once peaceful lake. At once the migrating urge rose in him so strongly that it would not be denied. His cries peeled forth again and he began to stroke his wings powerfully. He ran slappingly across the water and rose into the air. All about him other geese had taken up his cries and were rising also. A moment more and all was silent again save for the swish of straining wings as the great birds concentrated all their strength in flying.

SOON the geese that had risen with Honker were forming their own V behind the old gander whose family had been raised on the peaceful lake. Now the young goose began to understand why the others came to his lake. But he gave it little thought in the rapture of watching lakes and forests fall rapidly behind. Again his restlessness rose in his throat and peeled forth. But the leader

of the formation knew what pace was best and the younger birds were obliged to contain their impatience.

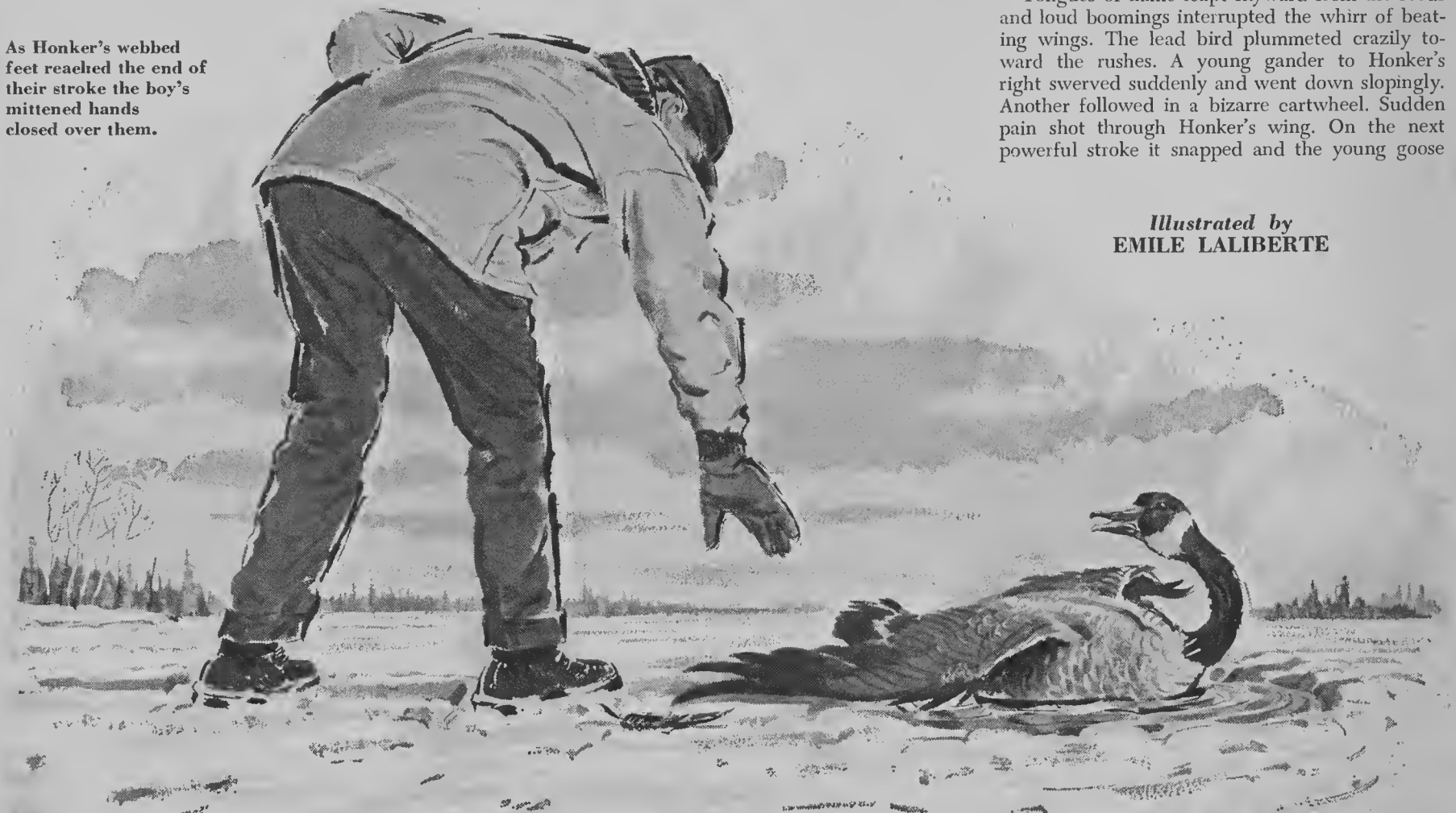
GRADUALLY the sun rose to its zenith and began to slope down into the western sky. Still the many wings beat their way southward. By mid-afternoon Honker began to tire but still the formation sped on. When the red sun had dipped to the horizon the young gander felt he could go no farther. Indeed, he and many of his age mates would have dropped behind had not the old gander called out encouragingly from time to time.

At last, when the sun was no longer visible above the earth's western rim and the fields and woods had blended into a single dark landscape, the tempo of the wing beats lessened and the flock began a slow descent. It was only then Honker became aware of a small lake shimmering like a bright jewel in the autumn twilight.

Minutes later the lead geese were winging over the willows that fringed the bright water. Honker saw the old gander's feet come down in silhouette against the silver lake. Immediately his own began to drop from their long vigil among his feathers. At this moment he also became aware of ominous figures rising from the reeds that separated the willows from the water. Instinctively his feet came up again as older geese began a chorus of warnings. Tired wings at once took up the strain in a frenzy to regain lost altitude. For some it was too late.

Tongues of flame leapt skyward from the reeds and loud boomings interrupted the whirr of beating wings. The lead bird plummeted crazily toward the rushes. A young gander to Honker's right swerved suddenly and went down slopingly. Another followed in a bizarre cartwheel. Sudden pain shot through Honker's wing. On the next powerful stroke it snapped and the young goose

As Honker's webbed feet reached the end of their stroke the boy's mittened hands closed over them.



Illustrated by
EMILE LALIBERTE

spun earthward. A moment later he hit the ground and lay stunned and helpless.

Shouts and the sound of running feet roused him and he turned crouching toward the water. At the edge of the lake he dropped into a muskrat run and waited. To swim out onto the bright water was to be seen and killed. For a long time the hunters searched for him back and forth through the rushes. Still he waited. At long last the men disappeared and soon their voices died out beyond the willows. Honker was free to swim out to the safety of the center of the lake.

Loneliness and pain were the young gander's enemies in the long days that followed. Hunger

plagued him too, for there was little to eat in the water that formed his prison. This gnawing hunger drove him to make infrequent forays to the barley stubble beyond the reeds and willows that skirted the lake. He knew it was dangerous to venture out of the water for hunters still came to the shores of the lake. On several occasions they almost caught him. Twice they shot at him. But, as the weather grew colder and ice began to form around the edges of the lake, they stopped coming.

At first Honker had no trouble breaking through this ice when hunger drove him to the barley field. Later he had to climb onto it if he wished to hunt for food. As the ice crept out over the lake he became

anxious because it increased the distance between safety and the grain and so increased the danger. It worried him even more that his narrowing circle of water shrank each night. Then, one afternoon a fortnight after the first ice appeared, the goose's troubles multiplied. Suddenly snow came.

This made food even harder to find. Worse than this, it made his tracks to and from his feeding ground visible to any enemy that might chance to cross them. A week later that enemy appeared in the form of a coyote. Fortunately for Honker the newcomer followed the trail into the field first. The goose, having just emerged from the willows, saw him and hastened to the safety of the small patch of open water still remaining in the lake.

As long as the coyote loitered about the weeds Honker dared not venture from the lake. His enemy lived off the mice to be found there all the time waiting for a tastier meal. From time to time he ventured out onto the ice to test the thickness of its inner edges and judge the size of the narrowing circle of water. Meanwhile, hunger and cold weakened Honker and dulled his fear of the inevitable.

A week after the coyote's first appearance a sudden cold snap sent the mercury huddling to the bottom of the thermometer, and had it not been for the warmth of Honker's wasted body in his night-long vigil of constant swimming he would have frozen solidly in the ice. When dawn finally came a man could have stepped across the remaining circle of water. There the coyote waited.

THOUGH he knew the inevitable had come, the young goose met his enemy's attacks boldly and with great courage. For the moment his exhaustion was gone and he maneuvered skillfully to keep a maximum of water between himself and the coyote. Nor were all of his tactics defensive for, from time to time, his long slender neck snaked his powerful bill forward to return with tufts of his enemy's fur. As the fight progressed, webbed feet and slashing wings spilled water from the open space onto the ice surrounding it. The attacker's footing became precarious. He feared he might fall or be pulled into the water and that he might drown. This made him cautious and prolonged the fight. However, he had been denied his feast for a long time and he pressed home his attack with great skill. He circled his prey rapidly, hoping to

catch him on the near side of the water.

At times he skidded to a halt in the hope that the bird's momentum would carry him within striking distance of his anxious jaws.

The fight was but minutes old when exhaustion again settled over Honker. The desperate strength lent him by fear ebbed away. His maneuvering slowed. His judgment became impaired. The coyote's teeth closed on the skin and feathers at the base of his throat. Panic seized him and his webbed feet thrust him back. Giant wings swept forward landing solidly on either side of his enemy's ribs. The coyote's lungs collapsed and his jaws snapped open as he caught his breath.

Honker was free . . . but his enemy's dinner was there for the taking. The blow that had freed the goose had also rebroken his partly healed wing. It floated out listlessly over the small patch of water. The coyote could catch it up at will and drag his prey onto the ice. Honker knew the end had come.

In a last desperate effort to escape he turned to duck under the ice and swim away to certain death. At the same instant his attacker spun about and sped away in the direction of the willows.

A MOMENT later the young gander's pain-wracked gaze focused on a pair of human feet beside his prison. Young Bruce, who lived beyond the barley field, had seen the coyote while setting weasel traps and had come to investigate.

Honker's eyes lifted until they met those of the teen-aged youth. The pair studied each other momentarily. Then the boy stepped forward and stooped over the goose. Honker snaked his head under the ice and drove his webbed feet back with all his strength. But as his feet reached the end of their stroke they broke the surface of the water and the boy's mittened hands closed over them. Honker was lifted clear of his narrow pond. A strong arm went round him pinning his wings. And, before he could renew his struggles, he was thrust into the dark warmth inside his captor's jacket.

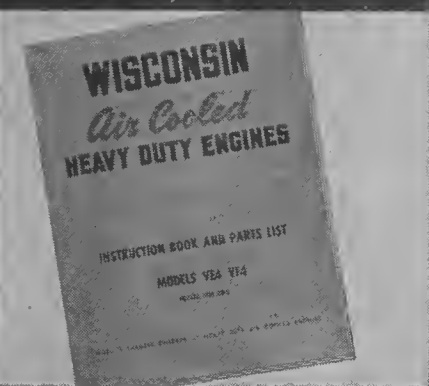
In the half hour it took Bruce to bear his prize to the farm beyond the willows, Honker relinquished his will to fight. Perhaps his decision was due to the comfort provided by the jacket. Perhaps it was because of his own exhaustion. In any case, when he was placed gently into a

(Please turn to page 64)

1 It takes only a minute to clean out and re-fill air cleaner bowl at bottom. Sight check tells when pre-cleaner bowl at top should be emptied.



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Ford Motor Company of Canada Limited

(Continued from page 62)

box in the farm kitchen he didn't struggle. Here was food and warmth and splints to ease the pain of his broken wing in the hours that followed. He wished nothing more. Later, he grew to love the boy who had rescued him. This pair had much in common.

BY the time spring began to pry the icy fingers of winter from the land the boy and the goose were inseparable. But, as spring progressed and melting snows gave way to the first grass and leaves of the new season, a subtle change developed in this relationship. The change, imperceptible at first, grew as the spring won its battle with the lees of winter. By mid-April a recovered Honker was vastly impatient within the confines of the farmyard. Bruce

did not understand these changes. He was hurt, and one day when Honker would no longer tolerate his attentions, his widowed mother saw this hurt.

"... That board, and sleep, and feed, and know not me," she quoted gently as if speaking for the bird. Bruce, unaware of her presence until now, looked at her, puzzled. "I cannot rest from travel" she continued. "I will drink life to the lees. . . ."

"I don't know what you mean," said the boy. But the mother was not convinced. She knew there was something of the ancient Ulysses in all boys and in all wild creatures. For this reason she explained her meaning by reciting the lines again. Meanwhile, her son watched the restless Honker and tried to understand.

As April waned toward May,

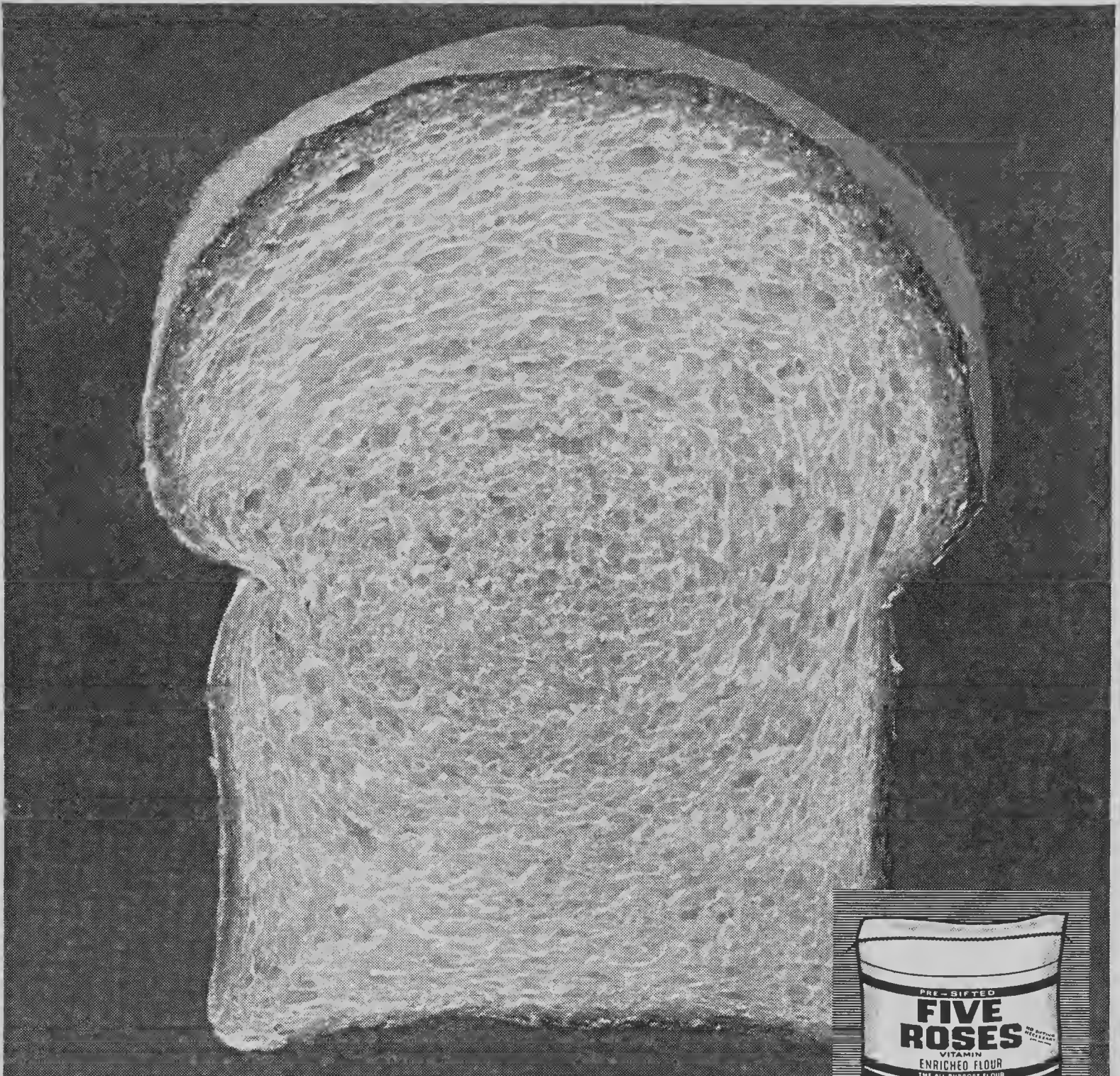
Honker's restlessness grew. One dawn in early May it was so strong that the young gander could no longer contain it. He flapped his great wings and gave it voice in piercing cries that filled the farmyard and echoed back from the buildings surrounding it. The anxious Bruce deserted his bed to discover the cause of the loud honkings. His mother followed but her concern was not the goose.

The boy's troubled haste had carried him within sight of Honker before he heard the young gander's longing cries echoing back from the spring-filled skies. Looking up he saw a great V of Canadas winging their way northward. Suddenly the thing his mother dreaded, though she knew it must come, welled up in him. He wanted to cry out to the geese to wait for him and he would

fly with them. But it was Honker who answered.

GONE was his fear of retesting his twice-broken wing. Gone his dread of pain, of hunters, of coyotes. . . . Forgotten his love for the boy who had rescued him. Nothing remained save the wild longing that consumed him. He sped across the barnyard sweeping his great wings with all his recovered strength. They caught the morning air. They held. He lifted the webbed feet that had been earthbound so long. He was flying and his loud voice boomed forth again in wild exultation.

Tears of loss—perhaps of longing—welled in the boy's eyes. He swallowed hard. Then his mother's arm was across his shoulders and together they watched Honker until he joined the flock that had circled back to wait for him. V

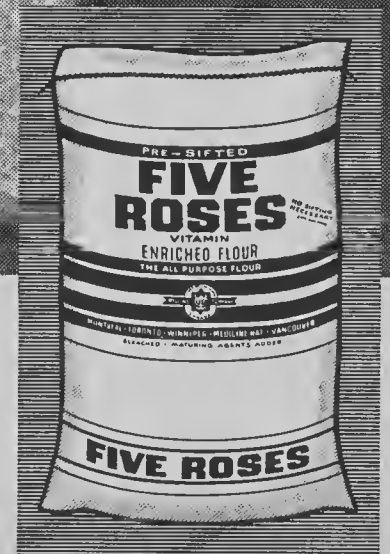


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Home and Family

The Country Guide's magazine for rural women

Easter Message

EASTER is here again. There are three reasons why I know it is here. The calendar on my desk tells me so; so does the children's chatter about coloring eggs. Then there are the softening signs that touch my sight and senses as Easter walks hand in hand with spring across the countryside.

Days lengthen. Winter's frosted fields turn into living, fragrant earth. Ice-locked waters melt into lively creeks and rivers. Bare bushes stand, awaiting the season's signal to spill forth their new greenness. Each in its own way is resurrected into new life.

So too with us. If we are receptive to it, the season's wakening spirit touches our lives and reminds us that we share nature's urge for renewal. As nature renews herself, so can we.

And is this not the essence of the Easter message? Each one of our lives involves a continuing series of renewals, of little resurrections. They are evident each time we release old hurts, littleness of thought, futile purposes; each time we turn from faithlessness to faith and from indifference to concern for others; each time we lift ourselves up out of discouragement. For are these not the stones imprisoning the splendor of the human soul?

People, someone once said, are a little like stained glass windows. They glow and sparkle when it is sunny and bright; but when the sun goes down their true beauty is revealed only if there is a light from within. I like to think of Easter as the time when we renew and strengthen our inner light—E.F.





A table-top trophy display indicates that Joyce, Larry and Dale Dewar strive for ribbon-claiming calves.

by **GWEN LESLIE**
Home Editor

The Dewars Are Doers!

THE Lincoln Dewars live in New Perth, Prince Edward Island, on a farm which has been in the family for four generations. They farm 190 acres on this and another farm purchased a few years ago and maintain a registered Holstein dairy operation. All the cattle entered from the farm in the last provincial exhibition finished in the money, but they don't show very extensively because in Lincoln's words, "I'm just not home enough."

Why isn't he home? Well, he serves as secretary for the PEI Federation of Agriculture, Dairyman's Association and Farm Radio Forum; as chairman of the Advisory Committee to the Agricultural Prices Stabilization Board, and of the PEI Conference on Education; he is an executive member of the Atlantic Provinces Economic Council; an executive member of the board for the Canadian Foundation of Poliomyelitis; and he is education week representative for the Canadian Conference on Education. These varied responsibilities take him around the Island, to the mainland, and west across the Dominion.

Home or not, his influence is felt in the family. "The youngsters inherited their competitive spirit from their father," Lois Dewar says. "He's a great one for competing!"

Mrs. Dewar, currently provincial president of the PEI Women's Institutes, gets a great deal done in her own quietly competent fashion. She counts 21 years membership in the New Perth WI and has been president of it, district president, and a member of the provincial board. Now, as provincial president, she co-ordinates the programming for 320 Institutes on the Island.

"You get such wonderful results working with young people," Mrs. Dewar says, in explaining one of her reasons for Institute interest, "and the

Women's Institutes have given wonderful support to the youth work." The Institutes have taken a vital interest in the schools, too, supporting school libraries and setting up some new ones.

The WI membership poses some problems, and Mrs. Dewar faces them with a countrywoman's understanding. The organization suffers from the many demands on the homemaker's time. "So many women have jobs, in and away from home. Their hearts seem to be in the Institute, but they just don't have time," Mrs. Dewar finds. Mothers of small children have another problem. "There's no help in the country, and many interested women can't get away from home."

Mrs. Dewar feels her family is fortunate. "We're lucky to have a grandmother in our household, and, at the end of a fair day, we come home to lighted fires and a warm house." The grandmother in question is Mrs. Dewar, Sr., a charter member of the Island WI.

She welcomed a triumphant family home from the Rural Youth Fair last fall. At this fair, held annually in Charlottetown, winning entries from the 4-H clubs are judged. Dale 18, Joyce 17, and Larry 11, brought home silver trays awarded them for winning the reserve grand championship for showmanship. This was the first year the three had shown calves together at the fair. Dale's calf has merited entry for the past 5 years, Joyce's for 4, and Larry's calf qualified him for fair showing this year for the first time. Among them, they won first, second and third honors in their own calf club competition, thus qualifying for entry in the fair. Shown together in their section, the calves placed first and were judged reserve grand champions in the overall competition.

Dale, according to her father, has an instinct for breeding, feeding, handling and showing cattle and has persevered in developing it despite a bout of polio. The young Dewars had agreed on the sequence they would accept the calves as they were born, and they have tended and trained the calves they show.

Joyce brought a different honor home. She had been crowned Queen of the Rural Youth Fair, a title awarded on the bases of personality, grooming, manners, knowledge of provincial and national current affairs, and on the ability of candidates to express themselves through short talks. The last mentioned was no problem to Joyce, an experienced debater.

These were not the first honors brought home by the Dewar girls in their 4-H work. In 1960 both Dale and Joyce were selected to attend National 4-H club week in Toronto. Since their return, their group has kept in close touch and helped prepare the 1961 delegation for the national club week trip.

There is some friendly rivalry within the family too. Dale and Joyce, both in Grade 12 this year,

finished Grade 11 examinations with the same percentage and a total difference in marks of 11 points. Larry is in Grade 6; an older brother George is in his third year Science at University, studying toward a degree in Aeronautical Engineering.

There is a pride in the Dewars' cheerful activity. It's a pride in family, in their home, in their stock, and in high standards. It's the responsible pride of good citizenship.

A FARM PROJECT

FORTY years ago a saw mill operated from a pond on the farm purchased several years ago by Lincoln Dewar. After the mill closed the land was left to grow up in alders.

To the Dewars, the land offered nice pasture, a recreation area and some good land. They bull-



Lincoln Dewar looks over the half-mile expanse of new pond. The by-pass dam is to his right.

dozed a road into the old pond site and set about restoring the pond. Twenty to twenty-five feet deep and about one-half mile long, the new pond is spring fed and collects run-off as well. Now a by-pass dam controls the water level; the overflow joins a river below the property and 10 miles away runs into the sea. Declared a winter works project, a crew of up to 20 men worked 4 weeks in 1959 and 3 weeks in 1960. With the assistance of the PEI fish and game, welfare and labor departments and the Dept. of Labor at Ottawa, 25 acres are now open to the public for picnicking and fishing. A fish-rearing station nearby stocked the pond with 10,000 fish in 1960 to supplement the natural brook trout.

Considerable use has been made of the recreation area so far, although no signs have been put up yet to mark it as a park area. There has been surprisingly little litter left and Lincoln suspects guests are extra careful, thinking it is private property.

In winter, the center of the pond is used for skating and hockey.

Bought for pasture and hay, the new farm has also become a Dewar community project. V



Their ivy-framed fireplace makes an attractive setting for the Dewar clan. Left to right are Lincoln Dewar, Dale, Mrs. Dewar, Larry, Joyce.



The graceful curves of this brick charcoal grill blend in with the low garden wall to create an attractive cooking area for out-of-doors chefs.

Tricks with Bricks

THE home garden offers many opportunities to decorate with brick. Simple walks made of the same brick used on a patio adds distinction and provides continuity through the garden area. Brick walls can be used to enclose the various plantings or to divide the garden into contrasting sections.

For example, a very low garden wall, five or six bricks high, will define a planting area in an appealing way; higher walls will accent that division. If the garden has a slope, a brick retaining wall helps to halt erosion and also provides additional ground for planting.

Brick planter boxes make show-cases for a favorite garden flower. They also accent a shrubbery grouping. While they can be in any size or shape, they should always be scaled to the whole garden plan.

Brick is extremely versatile. It can be used in an almost endless variety of patterns, because of the various

sizes it comes in. For example, used in herringbone, stack bond, basket-weave or other geometric patterns, it adds charm and individuality.

Because it is hard-burned in a kiln, brick does not fade or change color through the years. It has other advantages: It can be cleaned by sweeping or an occasional washing down with water; it never needs painting and actually mellows as the years go by.

Before starting any such projects, look for help in the books to be found in your local libraries or consult the successful gardeners in your own district. There is also expert advice to be had for the asking from the horticulture specialists at provincial universities and government extension services.

Many simple brick outdoor projects can be handled by the careful home workman. In the case of more complicated projects, it's wise to consult a professional mason. ✓



A wall five bricks high makes a pleasing garden divider. Here concave areas formed by the wall's curving shape provide spaces for feature plantings.

April

April, why so long shedding Winter's worn-out dress?

I long to see you clothed in Spring's fresh loveliness.

With evening showers wash the earth, then when morning dawns—

Unroll your carpet of soft green, upon the waiting lawns.

Adorn the trees with budded leaf for Maytime to unfold—

And dress up each forsythia in garments of bright gold.

Spread patches of spring beauties to make the woodlands gay—

Put laughter in the little brook a-hurrying on its way.

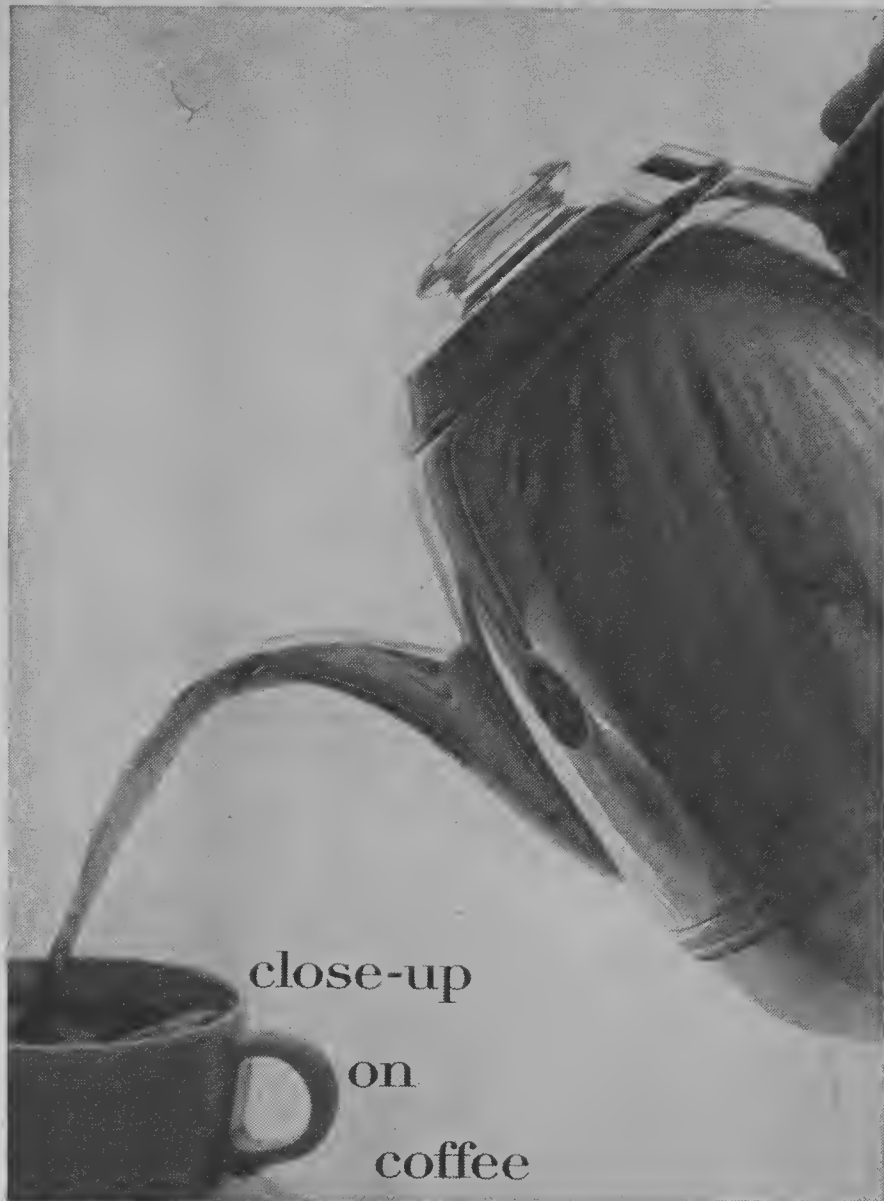
Let daffodils turn to the sun and toss their golden heads—

And tell the tulips to get up from their cozy winter beds.

Impatient! Yes, but still I know 'tis God who holds the key,

And that He will unlock the door—set winter's prisoners free.

—DORIS R. DULMAGE



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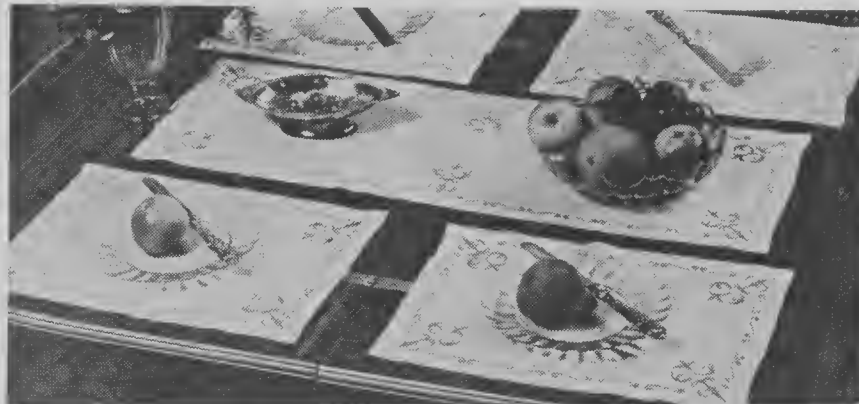
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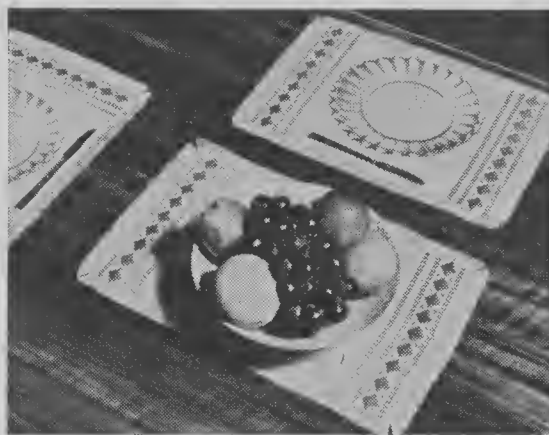
HANDICRAFTS

Stitchery

Cotton is suggested for the place mat and coffee pot cosy shown at right. Four colors are used in the floral motif which is worked in six stitches: satin, chain, twisted chain, daisy, French knot, laced back stitch. Order Leaflet No. 6317, price 10¢, for a color-keyed design diagram and stitching instructions.



This lovely "Tales of Hoffman" design looks intricate but is simply worked with satin, stem and twisted chain stitches. Order Leaflet No. 4840, 10¢.



Nine diamond-shaped motifs worked in satin stitch, separated by cross stitch pairs and framed by rows of running stitch, form a border design. Mats are hemstitched and fringed. Order Leaflet No. 4320, 10¢.



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for the children in

British Columbia's orchard community of Naramata



Young artists concentrate on a shoreline. While some of them wanted to work out by the pilings they willingly accepted their teacher's ruling that they must remain landlocked.

by FRED N. RITCHIE

WHEN members of the gang decide that the thing to do is join a painting class, perhaps it's an indication that today's young folk yearn to express themselves on paper more than we think they do.

Scores of British Columbia communities are finding it's easy to organize painting classes for children, providing they can find qualified teachers. And from the toughest little leaguer to the sweetest little 6-year-old with ringlets, children are showing their interest.

The "Painting in the Parks" movement was started in the city by the Federation of Canadian Artists. Its purpose: to put children's idle summer hours to use. "There's plenty of creative instinct and talent in our young Canadians," claims C. P. Withers, the busy director of the movement in Vancouver, "but the talent needs to be brought out. Whether or not a child has talent," he adds, "they all have an appreciation for beauty that should be brought out and developed."

The mechanics are simple: Classes run for 2 hours twice a week for 6 weeks with a maximum of 25 pupils. The age limit is from 6 to 16. For an enrollment fee, each child receives a box of paints, a paint brush, a box of crayons, charcoal, india ink plus a drawing-board and all the paper he can use.

Because children are the same everywhere, the idea works as well in the country as it does in the city. The orchard community of Naramata, B.C., is a good example. Here, during the summers of 1960 and 1961, 25 children from its 150 families found fun in expressing themselves on paper. Their teacher found that pastures, barnyards, orchards, beaches, woodlots and churchyards more than made up for the lack of a formal park.

Good attendance records marked the first classes and continued through the summer season, to

dispel early reservations that classes couldn't compete with chores, the swimming hole, snake hunts, bike hikes, through the range of summer activities. Strangely enough, the children, according to their parents, seemed to welcome the organized activity twice a week. One family actually thought this interest went a bit too far: they had to postpone a family camping expedition because young Hugh didn't intend to miss his Thursday painting class.

Painting obviously casts a spell over the youngsters. During the first hour of the class they'll disperse and settle themselves in an area—some under trees, some on top of rocks, some bottoms up, some kneeling, and some prone—each one oblivious to the other. For most youngsters, the spell was broken whenever their teacher produced a box of cookies. But a few always needed to be called more than once, because they were so absorbed in their efforts.

THOSE who teach art claim that most children love to create and express themselves freely. They feel that all too soon adult influences and inhibitions restrict the youngsters' creativity.

People long in the field of teaching child art know that the tiniest spark kindles the imaginative thinking of the very little ones. As they listen to a story children build pictures in their minds that almost always appear with complete honesty on their drawing papers. For example, after he'd heard how Madeleine de Vercheres held the fort so bravely during Indian raids, little Peter painted Madeleine rushing for the gate of the fort, an arrow headed for her back, a scant two feet from its mark. Asked about the arrow, Peter explained that Madeleine would reach the fort and shut the gate before the arrow got her.

Older children often require a slightly different approach. Unconsciously they try to please and

are hesitant about expressing their thoughts freely. Many of them need to be shown the basic rudiments of drawing still life and figures, and to really look at things in terms of color, design and composition. Most children will paint and paint. However, those whose hearts aren't in this kind of self-expression shouldn't be forced to attend simply because their parents want them to have a dose of culture.

SPEAKING of parents, it appears that some of us have things to learn about art and its relationship to our children. Parents are wrong when they say "I don't think Johnnie should attend. He wants to, but he hasn't any talent." This may be true, but who are we to judge?

Some parents want to see pictures in quantity brought home, yet Mary's developing talent can be seen in her observations about the color of the sky. As parents, we need to recognize that a development such as this is much more important than lots of pictures.

Those of us who lacked the "Painting in the Parks" opportunity in our youth, can be guilty of another mistake. We often look for a photographic likeness instead of the child's own interpretation of a scene. "But it doesn't look like it," we say. If we are guilty of this, particularly with young painters, we are mistakenly pushing them from painting as an art form and moving them toward the less inspiring business of copying.

Have I perhaps stressed the difference in age too often? The Naramata teacher actually found that age offered no barriers to painting. This was clearly brought out by the fact that a few grown-ups couldn't resist the fun. At first they could be found on the sidelines; later they were almost a part of the class.

Summer's end brings an exhibition in the Vancouver Art Gallery to which "Painting in the Parks" classes from all over B.C. send exhibits. Of the scholarships and prizes given to deserving young artists by the Forest Industries of British Columbia, young Naramata painters proudly claimed three scholarships. Their equally proud community arranged a special showing of the winning pictures and samples of each student's work.

Back in 1953, when Elmore Ozard and the late Ralph Hanslow started their first "Painting in the Parks" class in a Vancouver community center, they knew their movement had a purpose. Yet it's doubtful that they expected it to grow as it has done. They did know that if children are allowed to develop their talents, and if they learn to appreciate the world about them, then they've acquired something that is worthwhile. And what of the Naramata children? They so much enjoyed the experience that they surprised their teacher by asking for Saturday morning classes all winter. Request granted, their interest has never waned. V



Teachers try to establish a free, relaxed atmosphere in the painting classes. They feel this is the way it should be so the children can be almost alone to paint what they will.

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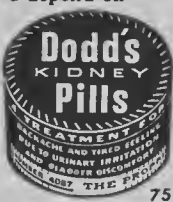
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Hon. Bryan L. Cathcart, Minister

These poems won honorable mention in our recent poetry contest

Rural Rhymes

What Is a Poem?

A poem is a threading of fine gems
Of language on a lofty line of thought;
A rainbow of the dewy pearls of truth
In delicate cobwebs of fancy caught.

'Tis music from the harp-strings of the heart,
With elfin echoes and a bell from Heaven,
In measured lines and singing tones that mark
The sense of rhythm to creation given.

It is a crystal vase to bear aloft
The buds of beauty and the bloom of truth,
An incense burning on some hidden fire,
God-given, though the censer seem uncouth.

For words are weak, and poets oft hard-pressed
To best express the passion that they feel,
The vanity of mere material things,
The Love, and Truth, and Beauty that are real.

Even may a life, revealing loveliness,
And filtering beauty from the flying years,
Become a living poem, fit to be
Set to the golden Music of the Spheres.

And, with the essences of lovely things
That will live on when Earth no longer turns,
Diffusing fragrance through Eternity,
Find that for which the restless spirit yearns.

—GERTRUDE WOOD
Glen Bain, Sask.

You said: We'll meet again, this is too sweet to lose.
We'll meet again, you said.
And I, believing, waited, and I hoped
Until my sick heart ached, and hope seemed dead
But still a murmur came—
You said.

We said: Nothing but love shall bind us each to each,
Nothing but love, we said.
For our way lies on the path we sought
And flowers spring up where our light feet tread
And all our dreams come true—
We said.

I said: Go then in peace. Love in your heart is dead.
Go now in peace, I said.
The mole shall be my brother and my friend.
Forever from my world the light is fled
And I shall be alone—
I said.

—B. HENDERSON
Ormsby, Ont.

Winter Night

The branches are pen scratches black on the snow,
The wind is a whisper sung high and then low,
The wail of the blizzard is stilled for awhile
And there's not a thing left of the moon but her smile.

The echo of sunshine is low in the sky,
The smoke from the chimney is flaunted on high,
The frost is a cloak but the dagger bites deep
And rivers are ice bound in deep winter sleep.

The twilight is gone, the stars claim the night
And ribbons of color bedazzle the sight,
The earth in its stillness holds peace for awhile
And there's not a thing left of the moon but her smile.

—ELSIE PATTULLO
Fort San, Sask.

Awakening

The prairie, drowsily,
Is baring its brown shoulders to the sun,
And into tattered rags the wind is rending
Its snow-wreathed covering.
The sun's great kiln hardens and seams and cracks
Its massive hide
Till rain, with gently kneading fingers, smooths
Its furrowed weathering.
The huddled willows wait expectantly
Bending in supplication
Of holding up their arms in wild beseechment
To the unknown above... 'tis then I hear
Faint voices whispering persistently;
The silver fluting of far-distant pipes;
The tap reiterant of dancing feet;
All sounds reborn that seem to rise from nothingness
And tug at my heart strings.
My soul is quickening in glad response
Knowing that spring again will set alight
Her buds on leafy trees;
And tiptoe gaily through the waxen grass
Bestrewing it with beauty and romance;
That woods with tangled melody will ring,
And breezes creep in winding labyrinths
Through virgin haunts.
Then shall I sense again the inward theme
Of life rejuvenated and continuant,
When all this wizardry that foils the wise
Awakens to the clarion call of spring.

—HELEN M. LLOYD
Calgary, Alta.

Family Proverbs

by EVELYN WITTER

"DON'T bury the biscuits," I said to our son Jim, as he stewed about the fumble he'd made in the last football game. His look and the tone of his "Yeah, I know," made me realize how much understanding had passed between us.

This line "Don't bury the biscuits" — one of many proverbs our family has made up — was created when, as a bride, I first tried to make biscuits for my husband Bill. No matter how much flour I added to the dough it stayed sticky. I was licked! So Bill wouldn't see the mess, I buried the whole batch of gooey

stuff on the slope right behind the house.

When he came home, Bill noticed the freshly dug spot. Upon investigation, he found my secret. "Don't bury the biscuits" became our family phrase for "Face your problems and try again."

When Jimmy began to walk and talk, he inspired another maxim. He would tell us that he was going "far away." Then he'd just trot round and round the yard until he was exhausted. To this day, anyone who makes a big fuss over getting nowhere is a "yard traveler."

Aunt Bertha and Uncle Arthur

were responsible for another favorite family-made proverb. Aunt Bertha was inclined to wear too much jewelry and make-up. Whenever she especially outdid herself, Uncle Arthur would say that she looked "complete except for a ring in her nose." So, for our family "all but a ring in your nose" means overdressed and gaudy.

One of our proverbs is about disappointment. Thank goodness we don't find much use for it!

A natural spring once bubbled on our farm. We took pride in its pure water. Friends from town who visited us often took jugfuls home. Then, when the gas line came through our place, the spring changed course and vanished. Along with the spring, some of our city friends vanished too. We remember them as "spring water friends." V

Fashion Wise



2267

No. 2267. Elastic at the back waistline fits a full-skirted dress to its wearer. Johnny collar and roll-up sleeves are shown. A shallow-necked sleeveless sundress and a sashed party dress included. Sizes 1, 2, 3, 4, 5, 6; price 50¢.



2231

No. 2231. This toddler wears suspender pants with elastic at back waistline; a back-buttoned shirt with short sleeves, polo collar; and a top-stitched blazer. Sizes ½, 1, 2, 3; price 50¢.



2302

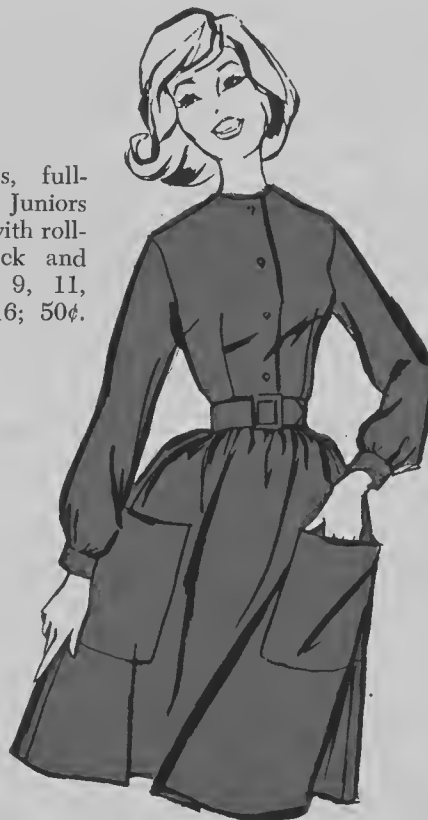
No. 2302. Floral appliques trim a sleeveless, shallow-necked dress for little girls. Elastic at the back waistline. Lace trims a dainty version with ribbon belt tied at back. Girls' 1, 2, 3, 4, 5, 6; price 50¢.



2155

No. 2155. Lace trims this collarless subteen dress with set-in puffed sleeves, full skirt, front-buttoned bodice. Four variations offer five dresses from one pattern. Sizes 8S, 10S, 12S, 14S; pattern price is 50¢.

No. 2261. This collarless, full-skirted shirtwaist for Young Juniors and Teens may also be made with roll-up sleeves, bias-trimmed neck and front closing. Young Junior 9, 11, 13; Teen sizes 10, 12, 14, 16; 50¢.



2261



2166

No. 2166. Fringed patch pockets add interest to a front-buttoned, collarless dress with unmounted short sleeves. A detachable collar and self-banded finishing provide variations. Miss sizes 10, 12, 14, 16; price 60¢.



No. 2202. Designed especially for misses 5' 3" and less, this front-buttoned dress features unmounted short sleeves, braid trim. An off-the-neck collar may be added if desired. Sizes 10, 12, 14, 16, 18; 60¢.



2202

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Yeast Rolls Rise to Any Occasion

JEAN McCULLOUGH greeted me warmly, then explained that she would have to finish kneading dough and shaping her yeast rolls. Her husband, Eldon, busy outdoors on their farm at Keswick Ridge, N.B., was president of the 3-day Keswick Fair which would open the following day, so she was particularly anxious that there be a good display. The yeast rolls were among her many entries to be judged early next morning.

The dough she was working was a soft one. The sweet milk rolls she makes are a favorite in the McCullough household and she agreed to share it with us. Beneath her recipe you will find a varied sampling of yeast roll recipes. Serve them with pride to friends and family, and in the months ahead perhaps you'll find a new entry for the yeast roll class at your local fair.



Mrs. McCullough bakes weekly with yeast for her family meal table.

Mrs. McCullough's Sweet Milk Rolls

- | | |
|----------------|-----------------|
| 1 qt. milk | ½ c. shortening |
| 2 c. water | 4 eggs |
| 1½ cakes yeast | 3 T. salt |
| 1 c. sugar | 13 c. flour |

Scald milk, add sugar, shortening and water. Cool to lukewarm.

Dissolve yeast by stirring with 1 tablespoon sugar. Add to milk. Stir in ½ cups flour and beat well. Then add eggs and beat. Add 5 cups of flour gradually, beating well. Turn dough out on a deeply floured board and knead until smooth and elastic. This should be a very soft dough. Place in a greased bowl. Brush top with melted butter, then leave in a warm place until doubled in bulk.

Knead gently and let dough rise again.

Mold into buns and place in greased pans. This will yield about 6 doz. rolls. For crusty rolls, place on a cookie sheet and space so they do not touch.

No-Knead Refrigerator Rolls

- | | |
|---------------------|--|
| ¾ c. boiling water | 1 pkg. active dry yeast |
| 2 T. sugar | |
| 1 tsp. salt | 1 egg, well-beaten |
| ¼ c. shortening | 3½ c. sifted all-purpose flour (about) |
| ½ c. lukewarm water | |
| 1 tsp. sugar | |

Measure the boiling water into a large mixing bowl. Stir in the 2 tablespoons sugar, salt and shortening. Cool to lukewarm.

Pour the ½ cup lukewarm water into a measuring cup. Stir in the 1 teaspoon sugar and sprinkle with yeast. Let stand 10 min., then stir well.

Stir dissolved yeast and beaten egg into the lukewarm sugar-shortening mixture. Stir in 2 cups of the flour and beat until smooth and elastic. Beat in enough more flour to make a soft dough (about 1¼ cups more). Divide the dough in half; place one half in a bowl, cover tightly and store in the refrigerator for baking the next day. Cover remaining dough and let rise in a warm place, free from draft, until doubled in bulk (about 1 hr.).

Grease 9 average-size muffin cups. Using a tablespoon, cut pieces from the raised dough to half-fill muffin cups. Brush tops with melted shortening. Cover with a tea towel and let rise in a warm place, free from draft, until doubled in bulk (about 45 min.). The refrigerated dough when baked the next day will require about 1½ hr. to double in bulk at this stage. Bake in a hot oven at 400°F. for 15 to 20 min. Yields about 18 rolls.

Hot Cross Buns

- | | |
|--|------------------------------------|
| 1½ c. milk | 1 tsp. grated lemon rind |
| ¾ c. sugar | 3 tsp. cinnamon |
| 2½ tsp. salt | 1 tsp. nutmeg |
| ½ c. shortening | ¼ tsp. mace |
| ½ c. lukewarm water | ¼ tsp. cloves |
| 2 tsp. sugar | 1 c. seedless raisins |
| 2 pkg. active dry yeast | ½ c. chopped mixed peel and citron |
| 2 eggs | 1 T. water |
| 5½ c. sifted all-purpose flour (about) | 2 T. sugar |

Scald milk; stir in ½ cup sugar, salt and shortening. Cool to lukewarm.

Measure lukewarm water into a large bowl; stir in the 2 teaspoons sugar. Sprinkle with yeast, let stand 10 min., then stir well. Beat one whole egg and one yolk together. Add egg and lukewarm milk mixture to dissolved yeast. Stir in lemon rind. Combine in sifter: 3 cups of the flour, cinnamon, nutmeg, mace and cloves. Sift into yeast mixture. Stir to combine. Then beat until smooth and elastic. Mix in seedless raisins and candied peel and citron. Stir in enough more flour to make a soft dough (about 2½ cups more). Place dough in a greased bowl and grease top surface of dough. Cover. Let rise in a warm place, free from draft, until doubled in bulk (about 1¼ hr.).

Punch down dough. Turn out on a lightly floured board or canvas and knead until smooth. Divide dough into two equal portions. Form each half into a roll 12 in. long. Cut each roll in 12 equal pieces. Shape pieces into smooth round balls and flatten slightly. Arrange buns on greased cookie sheets. Grease tops, cover with a tea towel and let rise in a warm place, free from draft, until doubled in bulk (about 45 min.). Beat remaining egg white and

the 1 tablespoon water together slightly. Brush mixture on the risen buns and sprinkle with the 2 tablespoons sugar. Bake in a moderately hot oven at 375°F. for 12 to 15 min. Mark each bun in a cross with a little confectioners' frosting.

by GWEN LESLIE
Food Editor

"Casserolls"

Whole Wheat Rolls

- | | |
|---------------------|--|
| 1 c. milk | 2 pkg. active dry yeast |
| 2 T. sugar | |
| 2 T. molasses | 2½ c. sifted all-purpose flour (about) |
| 2 tsp. salt | |
| ¼ c. butter | 2 c. whole wheat flour |
| ½ c. lukewarm water | |
| 2 tsp. sugar | |

Scald milk; stir in the 2 tablespoons sugar, molasses, salt and butter. Cool to lukewarm.

Measure lukewarm water into a large bowl, stir in the 2 teaspoons sugar. Sprinkle with yeast. Let stand 10 min. Then stir well. Next, stir in the lukewarm milk mixture and 2 cups of the all-purpose flour. Beat until smooth and elastic. Work in the whole wheat flour and enough more all-purpose flour to make a soft dough (about ¼ cup more). Turn dough out on a floured board or canvas and knead until smooth and elastic. Place in a greased bowl, grease top and cover. Let rise in a warm place, free from draft, until doubled in bulk (about 1¼ hr.).

Punch down dough. Turn out on a lightly floured board or canvas and knead until smooth. Divide dough in 2 equal portions. Cover with a tea towel and let rest 10 min. Shape each portion of dough into a 12-in. roll. Cut each roll into twelve 1-in. pieces and shape each piece into a smooth ball. Arrange the balls about ½-in. apart in greased shallow casseroles or about ¼-in. apart in greased round or square cake pans. Grease tops and sprinkle buns with a little whole wheat flour. Cover and let

rise in a warm place, free from draft, until doubled in bulk (about 45 min.). Bake in a moderately hot oven at 375°F. 20 to 25 min. for buns baked in casserole dishes; or in a hot oven at 400°F. 20 to 25 min. for buns in cake pans. Yields 2 doz. rolls.

Caramel Pecan Buns

- | | |
|-------------------------|--|
| ½ c. lukewarm water | ½ tsp. salt |
| 1 tsp. sugar | 2½ c. sifted all-purpose flour (about) |
| 1 pkg. active dry yeast | ¼ c. butter |
| ¼ c. shortening | ¾ c. lightly packed brown sugar |
| ¼ c. sugar | ½ c. corn syrup |
| 2 eggs, well beaten | Pecan halves |

Stir the 1 teaspoon sugar into the lukewarm water. Sprinkle with yeast. Let stand 10 minutes, then stir well.

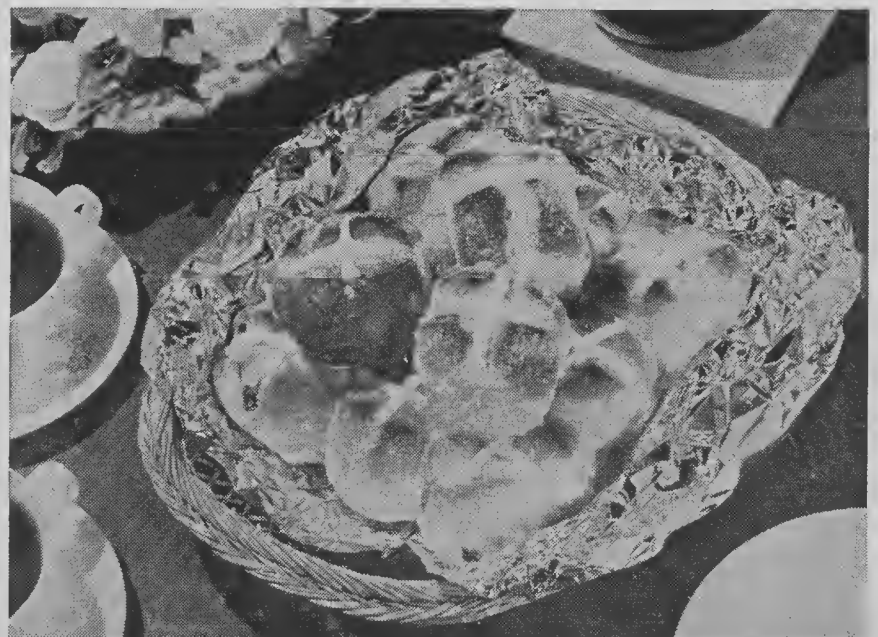
Cream shortening in a large bowl. Gradually blend in the ¼ cup sugar. Add eggs, part at a time, beating in well after each addition. Mix in dissolved yeast. Add salt to 1½ cups flour and sift into liquids. Stir to combine. Then beat until smooth and elastic. Work in enough more flour to make a soft dough (about 1¼ cups more). Turn dough out on a floured board or canvas and knead until smooth and elastic. Place in a greased bowl, grease top and cover. Let rise in a warm place, free from draft, until doubled in bulk (about 1½ hr.).

Cream the butter; blend in the brown sugar and corn syrup. Drop 2 to 4 pecan halves in each of 18 greased muffin cups.

Punch down dough. Turn out on a lightly floured board or canvas and knead until smooth. Divide dough in 2 equal portions. Roll one to a rectangle 9 by 12 in. Spread with half the brown sugar mixture. Beginning at a narrow side, roll up jelly roll fashion. Cut the roll in nine 1-in. pieces. Place the pieces, cut side down, in prepared muffin cups. Repeat with remaining dough and sugar mixture. Cover rolls and let rise in a warm place, free from draft, until doubled in bulk (about 45 min.). Bake in a moderately hot oven at 375°F. for 15 to 18 min. Yields 1½ doz. buns. ✓

Key to Abbreviations

- | | |
|---------------|-----------|
| tsp.—teaspoon | oz.—ounce |
| T.—tablespoon | lb.—pound |
| c.—cup | pt.—pint |
| pkg.—package | qt.—quart |



Grated lemon rind and candied peel and spices flavor these Hot Cross Buns.

[J. Walter Thompson Co. photo]



Myrtle, the Turtle

by EDITH MOSHER

UNTIL Myrtle came to our house as a gift, complete with glass bowl, shiny pebbles and turtle food, we did not know turtles came in such small sizes.

We named her "Myrtle" — Myrtle, the Turtle — but actually we never learned if she were a girl turtle or a boy turtle. We did learn, before many days had passed, that little Myrtle, who was only two inches

basked on the float, dug in the sand and came eagerly to get the turtle food lunch which we scattered on the water once each day.

Sometimes, when we changed the water and scoured the pan, we gave Myrtle a change by putting her into a big plant pot in a sunny window. It was interesting to watch the tiny thing dig in the earth at the base of the giant geranium, apparently



With a flip of her tail Myrtle swam down into the pond's murky depths.

long, didn't like the slippery glass bowl at all.

She scrambled and scratched up and down its sides, sending her pretty pebbles helter-skelter, as she looked vainly for some way out of her glass prison. We solved her problem by lifting her out on the floor.

But, after all, a big farmhouse kitchen floor, covered with brown and green linoleum, is not the safest place for a little brown and green turtle two inches long. If two big farm boots clumped across the floor, or four furry paws with a sniffing nose attacked, Myrtle never thought to scurry to safety. Her idea of finding a safe hiding place was to pull in her neck, her tiny tail and her four little flippers of feet, and crouch inside her shell. She seemed to believe that because she could no longer see her "enemies" they could no longer see her.

We decided to make her a sort of "aquarium" using an enameled dishpan. We propped one side of the pan on a book so that water was deeper on one side. On the shallow side we made a little beach with clean sand and the pebbles from the bowl. Then the boys made a tiny float from peeled alder twigs lashed together with twine, not unlike Robinson Crusoe's raft. They anchored the float in the water on the deep side of the dishpan.

Myrtle seemed perfectly happy in her dishpan home. She swam,

searching for, and finding, things she considered good for food.

Someone told us turtles like to vary their diet with living insects. After that, we often gave Myrtle a beetle or a fly.

During the long cold winter, Myrtle seemed contented enough. But, with the first warm spring days, she began climbing up the sides of the dishpan as she had done in the bowl that had been her first home. We began to suspect she was lonesome for her own kind. Then one day, when the children came home from school with reports that there were turtles no larger than Myrtle swimming in the pasture pond, we decided to give the little turtle her freedom. We carried her, dishpan and all, down to the pond.

Sure enough, there were two tiny turtles swimming close to the bank. Leaning over the water, we lifted Myrtle out and placed her on the tip of a sunken log near the shore. Then we waited.

MYRTLE erouched on the log for a moment. Then her head shot out, her little muzzle lifted and weaved back and forth, as if she was sifting the air currents to be sure she was in the great outdoors at last. At last, with a plop, she hopped into the water and swam down out of sight. Almost sadly, we watched Myrtle's tiny tail flip out of sight

(Please turn to page 74)

There's nothing just like Onion Pinwheel Buns ...so spicy-nice!



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You'll need for the dough:

- ¾ c. milk
- ¼ c. granulated sugar
- 2 tsps. salt
- ¼ c. shortening
- ½ c. lukewarm water
- 2 tsps. granulated sugar
- 2 envelopes Fleischmann's Active Dry Yeast
- 2 eggs, well beaten
- 4 c. (about) once-sifted all-purpose flour

for the filling:

- 1 c. coarsely-chopped onion
- ¼ c. butter or Blue Bonnet Margarine

for the topping:

- 1 egg yolk
- 2 tbsps. cold water
- poppy seeds

1. Scald milk, stir in ¼ c. granulated sugar, salt and shortening. Cool to lukewarm.



2. Meantime, measure lukewarm water into large bowl and stir in 2 tsps. sugar. Sprinkle with yeast. Let stand 10 mins., then stir well. Stir in lukewarm milk mixture, well-beaten eggs and 2 c. of the flour. Beat until smooth and elastic. Work in remaining 2 c. (about) flour.



3. Knead dough until smooth and elastic. Place in greased bowl. Grease top. Cover. Let rise in warm place, free from draft, until doubled in bulk—about 1 hr. Meantime, slowly cook onion in butter or margarine, stirring often. Cool.



4. Punch down dough, knead until smooth. Roll out to 12" x 18". Spread ½ dough lengthwise with onion mixture, cover with unsprayed ½ of dough and cut crosswise into 18, 1" strips. Twist each strip several times, then place one end on greased cookie sheet and wind rest of strip around it; tuck end under. Cover. Let rise until doubled—about ¾ hr. Brush with mixture of egg yolk and cold water. Sprinkle with poppy seeds. Bake in hot oven, 400°, about 15 mins. Makes 18 savory buns to serve with soup, salad, cold cuts.

Boy and Girl

under a lily pad as she joined her kinfolk in the murky depths.

We returned to the pond several times during the next few days. We had decided to put her back in her dishpan if we found her wandering about, sad and unhappy, even if we had to catch her a companion from among the wild turtles in the pond. We saw many "Myrtle-sized" turtles on our trips to the marshy pond, but if one of them was our little pet, she didn't recognize us. If one of them was Myrtle, we couldn't recognize her either.

We like to think she stayed in the pond, living her life out in peace and contentment with the pond's other inhabitants. Whether she stayed or moved onto other scenes, we still feel we did the right thing to give her her freedom. Now, whenever we go into a dime store or pet shop and see a tank full of scuttling baby turtles we remember her — the little friend who taught us valuable nature lessons during the winter she lived in a dishpan in our sunny kitchen window.

From House to House
(In 19 Steps)

by FLORENCE A. GRITZNER

To solve this puzzle, start at home, and by changing one letter in each word, proceed downward, following the definitions, until you are home again.

- 1. a home
- 2. an animal
- 3. coarse shrub
- 4. a fowl
- 5. a horned animal
- 6. not tight
- 7. an insect
- 8. to awaken
- 9. a rodent
- 10. home again

Answers

- 1. House
- 2. Horse
- 3. Horse
- 4. Goose
- 5. Moose
- 6. Loose
- 7. Loose
- 8. Loose
- 9. Mouse
- 10. House

Cold in the Head

My nose is red,
My eyes are too.
My tongue feels like a worn out shoe.
My voice is hoarse,
My tonsils tickle,
And sneezes keep my nose a-prickle.
I wish that I had worn galoshes;
I'll wear them now till May rain
splotches.
Then I need never stay
Inside on such a lovely day.

—PATRICIA O'BRIEN, age 7,
Falmouth, N.S.

Raindrops

Oh raindrops! Oh raindrops!
So wet and so small,—
Make me feel funny
As on me they fall.

They make lots of puddles,
Such fun to walk through,
I like to see raindrops
Falling — don't you?

—DANNY DULMAGE, age 7,
Stouffville, Ont.



by M. E. GODDARD

LIVING in the country has taught me one thing — with especial reference to geese — sentimentality is a luxury.

The cottage I bought was a gem with its mellow thatched roof, sturdy oak beams, and surprising variety of delightful nooks and crannies. Yet all modern conveniences had been skilfully and unobtrusively inserted.

The garden was well matured and charming. Gay flower borders surrounded the lawn and rambling little paths led to a well-stocked orchard.

The only problem which presented itself was an acre of swampy meadow bounded by a running stream.

That acre of grass was a worry. It was too wet to be cut by a mower and the use of a scythe was beyond me. In vain I sought the services of someone skilled in the rapidly vanishing art of scything. So the grass just grew while I stood and stared.

But while I was staring a farmer from across the stream hailed me and said, "Why don't you keep geese? They'll graze off that grass for you and show a tidy little profit, too."

I was thrilled with the idea and immediately started inquiring about geese and where they could be obtained.

I found that there was a water-fowl farm not far away, so off I went one morning. There I saw an amazingly varied assortment of geese. They fascinated me and so I listened with rapt attention while the owner extolled the virtues of each breed. Embdens, Toulouse, Chinese and Roman were all highly recommended.

Because of their pure white plumage, their size and the fact that I was told they are good to eat I finally chose the Embden. It was then I learned the meaning of a set of geese—three geese and one gander.

I also learned that the sex of geese is difficult to determine at any other than the breeding season and I was advised to buy two-year-olds, which I did.

—When three gleaming white geese and one equally gleaming white, unrelated gander were delivered to my home, I immediately introduced them to the problem paddock. To my delight they were soon grazing away at it, exactly as my neighbor had foretold. They seemed to take kindly to both the paddock and their little house, which I had bought cheaply as it was second hand.

The geese always kept together, and they were always on the alert. The slightest noise would stop them feeding and the gander would draw himself up with the precision of a sergeant major. Stretching his neck

to its limit, he would raise himself onto his webbed toes and bark his indignation in tones which would have rung round any parade ground.

But after a time my approach was heralded by quite a different note. Half running, half flying they all cackled softly as they hurried toward me, their gleaming wings stretched to full span as they waltzed around me.

After a welcoming word or two from me, they folded their wings and chattered excitedly while they took titbits from my hands.

As the winter drew on and the weather grew stormy there seemed to stir within them some call of the wild, for their cries became a little weird.

But winter passed and a mild February brought a complete change. The aggressive note of the gander's voice toned down to a mellow caress.

All of them spent a considerable part of the day on the edge of the stream. They dived and flapped their wings in the water; scooped it up in their bills and poured it over each other. Then they came ashore, shook themselves free of surplus drops only to return to the stream again for a further ablution.

The gander appeared to have an impartial regard for his ladies, not favoring one more than the others. They in their turn stroked his glossy neck with their orange bills with obvious devotion and appeared completely devoid of jealousy.

IN March there appeared in their house a cosy nest of litter and feathers upon which one of the ladies sat while the rest of the family stood around, watching her in affectionate admiration. Her egg safely laid, she covered it carefully with litter and then strolled out into the sunshine followed by her lord and fellow ladies.

Soon the other geese laid and eggs appeared with gratifying regularity. Some I sold; some I made into delicious omelet. The rest I left for the geese to hatch.

They went broody one by one and sat patiently over the twenty-eight days, with the gander in close attendance, always near the entrance of the house, ever on the alert to repel intruders. Woe betide the cat, dog or even bird, bold enough to trespass!

Each morning, one by one each lady came out to feed and wash, escorted by the gander who chattered to her with loving care. Never before had I realized how varied could be the notes of a gander's voice. A grand opera singer could not more vividly express his emotions.

But love, hate, alarm . . . the notes of all his varying emotions paled into insignificance against the aria of praise which rose into the air when the first gosling appeared!

IT took three weeks for all the eggs under the geese to hatch. Four goslings failed to survive the first week; four eggs were added. But when finally sixteen lovely goslings padded out with their mothers, I was delighted. The whole assembly was led down to the stream

by papa, with all the lordly pomp of an eastern potentate.

The goslings grew rapidly and June found them almost as large as their parents and quite as beautiful. The moment I called to them they would answer and come floating to meet me. I was devoted to them and they were devoted to me.

As the year advanced I was haunted by the knowledge that I couldn't keep them all and might have to sell some for Christmas. The very idea gave me the horrors until I made up my mind to find homes for them in the autumn, even if I

found I must give them away.

Friends and neighbors who came to admire were easily induced to adopt the youngsters. Some of them paid a moderate price. All agreed to let the question of sex settle itself the following spring.

How glad I am that I took my neighbor's advice and kept geese. They have grazed my rough paddock down until it looks like a lawn. They have given me great pleasure and heaps of amusement. And if I hadn't been so sentimental they would have afforded me a tidy little profit, too! V



Choosing a Career

ARE you a high school student? And are you wondering what you will do once you have completed your studies and received your diploma? Have you been tempted to leave school and get away from such school duties as homework and examinations? If you have, there are two things to consider.

First of all, you need to complete the course if you expect to succeed in whatever occupation you choose. Secondly, your chances of earning more and of being promoted to better positions increase with the amount of schooling and training you have. So let's assume you will complete high school. Where do you go from there?

Some boys will stay on the farm and share in the farm business. They will find university diploma or degree courses in agriculture particularly valuable. But many more rural young people will make their way into other occupations. Even now, as high school students, they are concerned about choosing a career.

CHOOSING a career at any time is a difficult task. Because you will be spending a large part of your life at that career, it's important that you choose wisely. How do you make such a choice?

First of all, ask advice of those adults who are close to you—your teacher, your parents, and those in your community who are doing the kind of work you think you'd like to do.

It's quite likely that there are whole areas of work not familiar to you, in which training is available through vocational and technical schools. Many of these occupations are described in the series of 46 pamphlets on "Canadian Occupations" prepared by the Federal Department of Labor. They outline a wide number of careers open to young men and women; the prices range from 10¢ to 25¢ for each booklet.

For example, Monograph No. 46 costs 20¢. It outlines the require-

ments for the major groups of office workers—secretarial, public contact, clerical, accounting and accounting machine operators. No. 10 outlines the requirements for the motor vehicle mechanic; No. 16 technical occupations in the radio and electronics fields.

SHOULD you go to university? One of the problems facing you when you are considering a university course may be financial. You, like many other high school students, may be asking yourself: How much will it cost? Where will the money come from?

At this point you might find the text-workbook "You and University" helpful. This text-workbook of 104 pages was prepared by Morgan D. Parmenter, professor of guidance at the University of Toronto's College of Education. It is distributed by The Guidance Center, Ontario College of Education, 371 Bloor St. W., Toronto 5, Ont. Professor Parmenter calls it "a text and workbook of information, suggestions and activities to help you make the most of present opportunities and to assist you in planning your future."

Its chapter headings are: 1. Second school graduation — what then? 2. Why consider university? 3. Should you go to university? 4. Selecting the course and the university. 5. What is available? 6. Gaining admission. 7. Financing a university education. 8. Succeeding after you are in. 9. My plan for university.

While scholarships, bursaries and educational loans are much more numerous now than you might imagine, it's wise to start your search for such assistance while you are in high school. Such help is available through provincial departments of education, universities, commercial firms. And don't overlook your own community: there are awards offered by churches, clubs and associations in many of your home districts.

Two publications available from

You sleep better between Wabasso Sheets



And so t

The Queen's Printer, Ottawa, Ont., will also be useful to you. They are:

Canadian Institutions of Higher Education: This lists the names, addresses, courses offered and general information on university entrance requirements and fees. Its cost: 75¢.

University Entrance Awards: This publication lists details of awards tenable at Canadian universities and colleges valued at \$100 or more. It is published every two years and costs \$1.00.

Very often it's difficult in high school to take the long, objective view. After all a paying job, that means your independence, seems attractive. But look at some figures from the Institute of Life Insurance: Every year of high school adds \$16,000 to lifetime earnings; each year of college an extra \$25,000. The man whose education ends in public school will earn on the average \$178,000 in his 40 or more years of work; the high school graduate

\$243,000 in his working life; the man with a college degree on the average over \$347,000.

If you need further proof, consider what Kurt R. Swinton, president of Encyclopaedia Britannica, points out: two-thirds of those unemployed today have no more than an elementary education. At the same time, there are many positions going unfilled because there are not people with the necessary skills ready to take them. Doesn't this convince you of the importance of getting all the education you can? ✓

Branch Line Abandonment

(Continued from page 16)

IT is proposed by the Commission that the following procedure be followed in implementing this plan:

✓ The Board of Transport Commissioners should indicate to the railway companies the period in which applications for abandonment will be received.

✓ The railways should apply to the Board for leave to abandon a line, supporting the application with a statement showing the system net loss for which the branch line is responsible. After verification of this amount, the Board shall authorize full payment of the loss out of the Fund in all cases where abandonment is not allowed within 3 months of the date of application. This payment shall continue until the date of abandonment.

✓ Once the limit of the Fund is reached in any year, payments in

respect of other lines shall be made as funds are released and shall commence from that date.

✓ Payments shall be published annually and posted on the lines so affected by the railways and published in the local newspaper by the Board.

✓ The Board shall make an announcement in all communities concerned of the dates the public hearings will be held to determine the effective date of abandonment. (Normally, considerable time will elapse between the date of application and the date of abandonment, but this should not delay the date of hearing since adjustment of investment will take time.)

✓ Following the hearing the Board will either:

(a) set and publicize the date of abandonment to all parties and communities concerned.

The factors to be considered in fixing the date of abandonment should include the condition of the line, the effect on investment tied to rail, the alternative services available and such other matters as affect a reasonable and orderly transition.


or (b) in exceptional circumstances, order continuation of the line indefinitely. The exceptional circumstances would arise only when no reasonable alternative transportation is available nor could be made available in the foreseeable future.


The intention of the abandonment plan is that once a line is presented for abandonment it shall remain in service at no burden to shippers and no profit to the railway until and only until the date of abandonment announced by the Board. ✓

TEXACO FARM TIPS...


OIL COLOURS: RED MEANS DANGER


A high-quality detergent oil like Havoline darkens very rapidly in your engine, because it's holding onto the dirt, ready to carry it out of the engine when you drain the oil. But what does it mean when your oil turns *another* colour?


 Red oil may mean a leaky fuel pump diaphragm, which lets quantities of dyed gasoline into the oil. This gasoline thins out the lube oil, lowers its lubricating effectiveness. Red color may also result from overchoking, frequent cold starts. Where purple-dyed gasoline is used, of course, the oil will appear purple.

 White or cream-colored oil results from harmless white lead-ash that remains after a high-grade gasoline is burned in an engine that's in good condition.

 Temporary milky color in cold engine oil results from air being churned into the oil, and usually disappears as the oil warms up.

 Foaming and whitening of oil may indicate an air leak in the oil-pump intake.

 Black oil in a clean, new engine, almost always results from stop-and-go driving. The color is produced by black carbon fuel soot from inefficiently burned gasoline. All engines in poor condition will blacken the oil very quickly.

 Grey oil is a combination that occurs in comparatively new engines. It's a mixture of white lead ash and black fuel soot.

The best oil for any engine is Custom-Made. Stop-start driving and low-temperature running are brutal for any engine, and cheaper oils wear bearings and other parts against this. Havoline can — and does. It will protect your engine, cut down repairs and give you a gasoline economy. Custom-Made oil is on prompt delivery from your Texaco dealer. The man you trust for the efficient fuel and lubrication requirements.

WITH...



What Farm Organizations Are Doing

CFA SUBMITS BRIEF TO COMMISSION ON HEALTH SERVICES

The Canadian Federation of Agriculture has proposed that the nation develop a complete, prepaid National Health Insurance Plan under provincial and federal government sponsorship and control — a plan that would give full medical and surgical care at a premium even the lowest income group could reasonably afford.

The proposal was made in the Federation's brief to the Royal Commission on Health Services at the latter's Ottawa hearings in mid-March.

The CFA asked the Commission to "give particular attention to and recommend ways of achieving the co-ordinated planning of all services and conditions related to health — preventative, curative, nutritional and social—so that, as far as possible, the physical and mental health of the people shall be preserved, protected and improved on all fronts."

While recognizing it is important that the knowledge, competence and authority of doctors and other professional personnel be fully utilized and respected, the Federation rejected the idea that adequate coverage can be achieved through volun-

tary plans. The government approach the Federation recommends would inject an element of responsibility for ensuring universal coverage, how it is done, and how much is paid to have it done. Such a plan should not destroy the freedom of the medical profession, nor should it represent a threat to its professional integrity. Rather, the CFA felt, it should provide a sound economic basis upon which to build new and improved service and responsibility.

The CFA brief enlarged on the following seven basic principles which it thought should be included in a National Health Insurance Plan:

(1) A national compulsory plan should be undertaken by the Federal Government with the provinces.

(2) It should take into account the long distances and scattered populations of rural areas.

(3) The Plan should be contributory to a reasonable degree, but contributions should not be so high as to impose an unreasonable burden on any family or persons.

(4) The right of the patient to choose his own doctor should be retained.

(5) The terms of the Plan should provide, when groups of citizens so (Please turn to page 78)

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(Continued from page 76)
 desire, for the establishment of co-operative joint provision of medical services such as group practices, co-operatively-owned and operated clinics, etc.

(6) The Plan should include preventative, curative, nutritional and social services, so that the physical and mental health shall be preserved, protected and improved.

(7) Psychiatric services should be provided by public service rather than by private practice.

"We think," the CFA brief said, "that we have now arrived in this country at the point where adequate health services should be considered

a right of every citizen and a responsibility of the nation. The economic position of the individual should not significantly affect his ability to obtain these services, nor should the cost be an unreasonable burden. Universal medical care insurance, financed by moderate premiums, supplemented by Federal and provincial government tax revenues, can be and should be a very big step in this direction." ✓

FARM ORGANIZATIONS REACT TO WHEAT AGREEMENT

The new International Wheat Agreement, which was negotiated at Geneva during February and March, has brought various reactions.

The main purpose of the Agreement is to provide stability of prices and markets for world trade in wheat, in the interests of both exporters and importers. It has been a feature of the successive agreements to establish a price range within which importers and exporters agree to trade. One of the main developments in connection with the new 3-year agreement to come into effect on August 1 was the 12½-cent negotiated increase in both the minimum and maximum prices. This will bring the price under the IWA to \$1.62½ minimum and \$2.02½ maximum in U.S. dollars for No. 1 Northern in store at Fort William/Port Arthur and Vancouver. (On the basis of the rate of exchange on March 12, this price range in Canadian dollars was \$1.71½ and \$2.13%.)

The Farmers Union of Alberta release indicated that it welcomed the increase in the price range. It noted, however, that the FUA would have liked at least a 25¢ increase, instead of the 12½¢ one that was obtained. At the same time it felt the negotiated increase would be beneficial to both the farm economy and Canada's balance of trade. Not-

withstanding, the FUA maintained that the new IWA does not reduce the need for a higher Canadian price for domestically consumed wheat, because it thought it was doubtful whether it takes care of increased costs in the past year.

The Manitoba Farmers' Union president, R. Usick, said that the increased price range may prove satisfactory to farmers if world wheat markets continue in heavy surplus.

"Canada at present has no over-all wheat surplus to worry about," Mr. Usick stated, "but should another drought or other disaster strike Western Canada and a real shortage develop, then it would appear that the present negotiated prices would be too low.

"This 3-year agreement," he concluded, "will win the support of most farmers for this year. Only time and production conditions will determine whether or not this is a good agreement for the full 3 years."

The president of the Canadian Federation of Agriculture, H. H. Hannam, stated that: "In several ways it looks like we have an improved IWA for the next 3 years." Higher maximum and minimum prices, a greater share of the world wheat trade placed under the agreement, the probable inclusion of all major exporters, and improved definition of commercial exports are all encouraging features.

"Producers will welcome that agreement and will hope that all the participating countries, including the U.S.S.R., give it final ratification," he said.

Present trends in thinking about world agricultural trade are pointing to the need for more, not fewer, international commodity agreements, in Mr. Hannam's opinion. In this respect, also, the successful negotiation of a new and strengthened wheat agreement is encouraging. ✓

Science Now Shrinks Piles Without Pain or Discomfort

Finds Substance That Relieves Pain And Itching As It Shrinks Hemorrhoids

Toronto, Ont. (Special)—For the first time science has found a new healing substance with the ability to shrink hemorrhoids and to relieve pain and itching. Thousands have been relieved with this inexpensive substance right in the privacy of their own home without any discomfort or inconvenience.

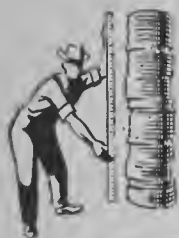
In case after case, while gently relieving pain actual reduction (shrinkage) took place.

Most amazing of all—results were so thorough that sufferers made statements like "Piles have ceased to be a problem!"

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